

January 16, 2009

MEMORANDUM

TO: State Board of Regents
FROM: William A. Sederburg
SUBJECT: Strategic Planning Session

Issue

The Utah System of Higher Education (USHE) and the State Board of Regents (SBR) need to identify strategic directions to focus resources, help shape the structure of the board meetings and committees, and finalize a strategic and operational plan for the future.

Background

Pursuant to the Strategic Session discussion of the December 5, 2008 Regent meeting, the SBR continues to assess its role in meeting the expectation to prepare Utahns for success in today's knowledge-based economy. To help focus resources, shape the structure of the board meetings and committees, and finalize a strategic and operational plan for the future, Dennis Jones of the National Center for Higher Education Management Systems (NCHEMS) has agreed to share data that shows the strengths of the USHE as well as the future demands and issues it will face. Dr. Jones has agreed to facilitate a discussion of the Board and Presidents to identify the strategic directions that need addressing if the USHE is able to successfully prepare Utahns for success in today's knowledge-based economy. It is anticipated that through the identification of SBR strategic directions, the structure of the board and committee meetings will be adjusted to help bring the strategic directions to fruition.

Commissioner's Recommendation

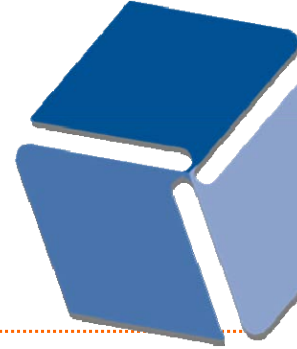
The Commissioner recommends the Regents receive Dr. Jones' presentation as a foundation upon which to build its strategic plan. Additionally, the Commissioner recommends that the Board committees engage in a strategic discussion that asks the following three questions: (1) What can each committee do to advance the Regents' strategic directions (following up on the discussion with Dr. Jones)? (2) What should be the strategic directions for each committee? (3) What is the "value added" to the System and institutions that each provides? During the committee discussions, please make note of particular issues, reports and functions that are currently managed by the SBR that each committee can recommend be shifted to the institutional boards of trustees.

William A. Sederburg
Commissioner of Higher Education

WAS:csm

- a. Chair's Report:
 - i. Governor's governance interest (Regent → Trustee authority)
 - ii. Business Roundtable
 - iii. SMART Sessions
 - b. Dennis Jones
 - i. Abridged Business Roundtable PowerPoint
 - ii. Facilitate discussion regarding Utah's key higher education issues
 - 1. Strategic issues currently suggested in white paper
 - a. Higher education and economic development
 - b. Impending growth
 - c. System and institutional development
 - iii. Lessons learned from dealing with other states/Regents
 - c. Commissioner's Report
 - i. Financial challenges
 - 1. Update on institutional/system actions/cuts
 - 2. Presidents' brief comments
 - ii. Legislative strategies
 - d. Prepare Committees for their strategic/operational afternoon discussions
2. Noon – 1 PM → Lunch
3. 1 PM – 3 PM → Committees
 - a. Essential items of business
 - b. Discussion of committee strategic directions
 - i. What can each committee do to advance the Regents' strategic directions? (following up on the Strategic Session discussion w/Dennis Jones)
 - ii. What should the strategic directions be for each committee?
 - iii. What are the committees' "value added" to the institutions/system?
 - iv. Is there a need for a committee restructure to support the committee strategic directions?
 - v. Advance notice of the March Regents meeting
 - 1. What authority/actions should be dealt with at the Trustees level versus the Regents level?
 - c. Other issues needing attention
4. 3 PM – 4 PM → Committee of the Whole
 - a. Committee reports
 - b. Other business...

Choosing Priorities for Ensuring the Future of Utah



December 11, 2008
Salt Lake City, Utah



NCHEMS

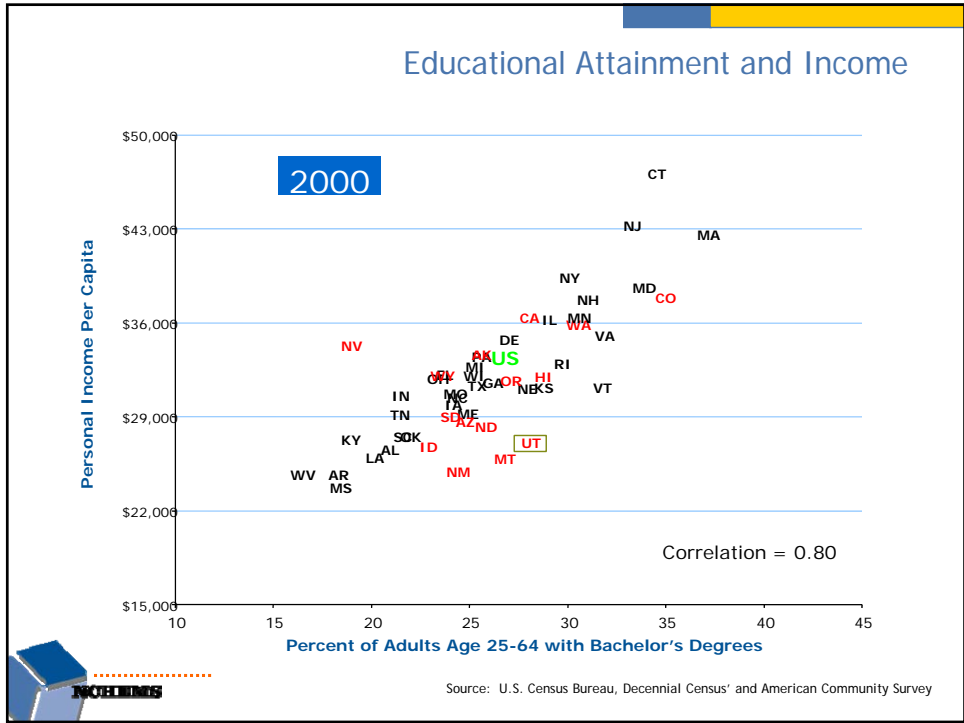
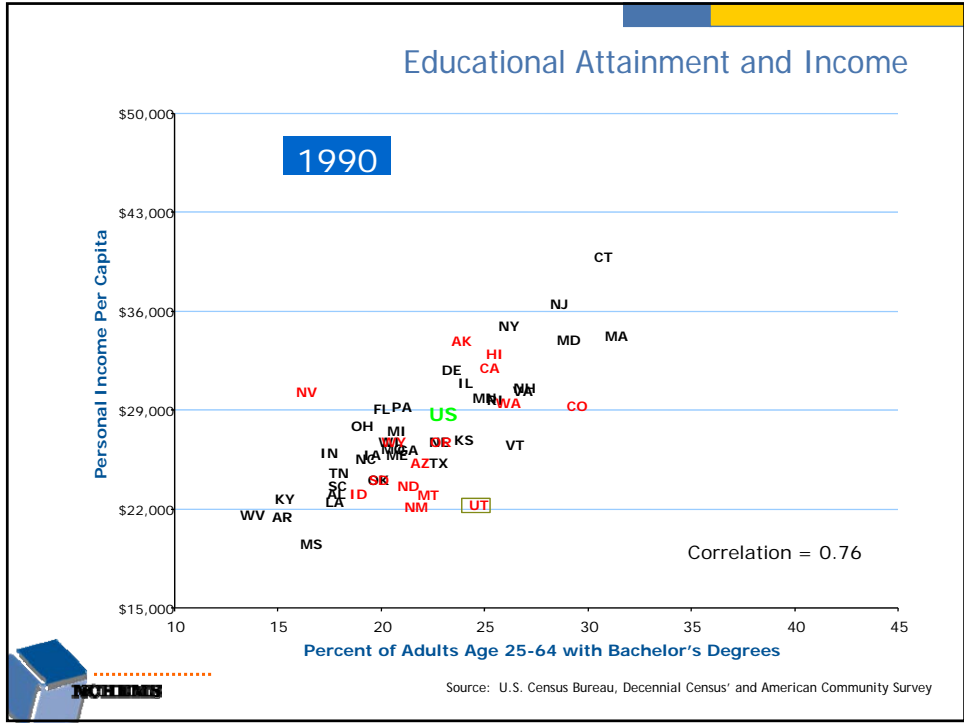
National Center for Higher Education Management Systems
3035 Center Green Drive, Suite 150
Boulder, Colorado 80301

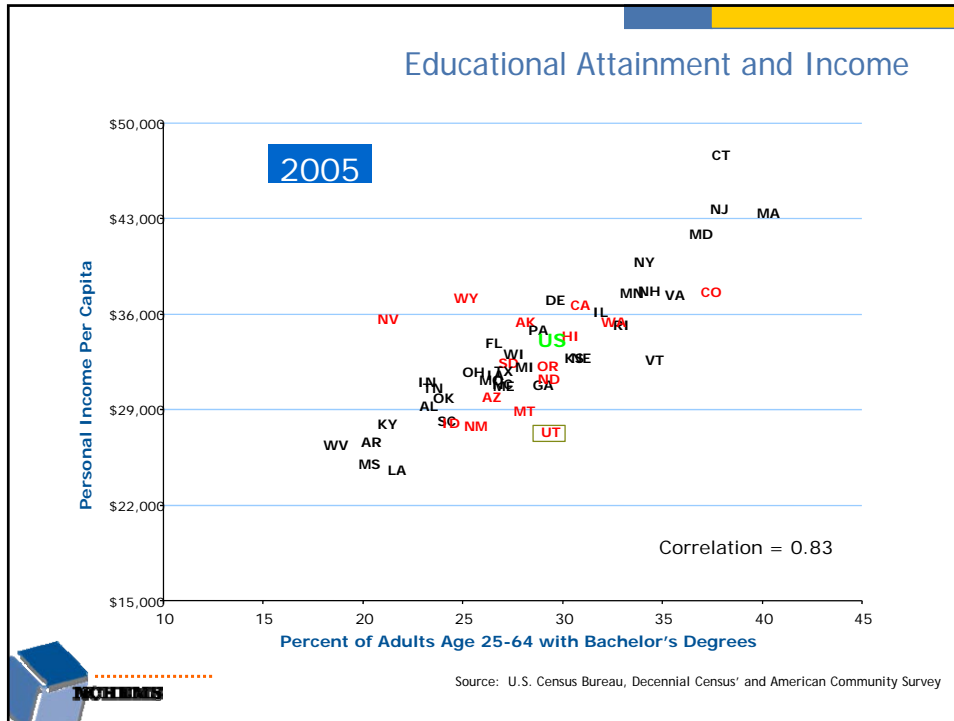
Education as a key ingredient:

WHY EDUCATION MATTERS



NCHEMS
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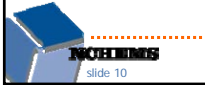
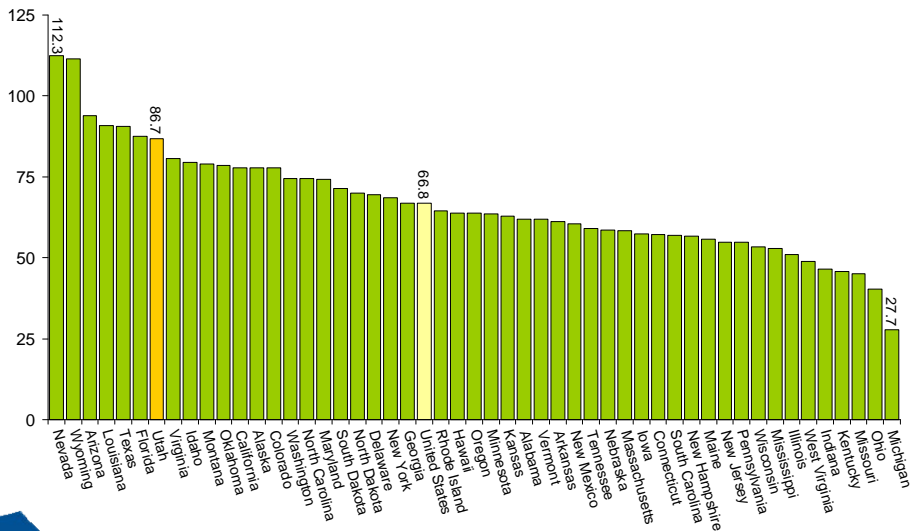


- ### Increasing Levels of Educational Attainment Lead to Improved Societal Outcomes
- Increased levels of workforce participation
 - Decreased rates of incarceration
 - Improved health outcomes
 - Reduced participation in Medicaid and other social service programs
 - Greater participation in artistic, cultural, and civic pursuits
 - Higher levels of volunteerism & societal engagement
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UTAH'S STRENGTHS

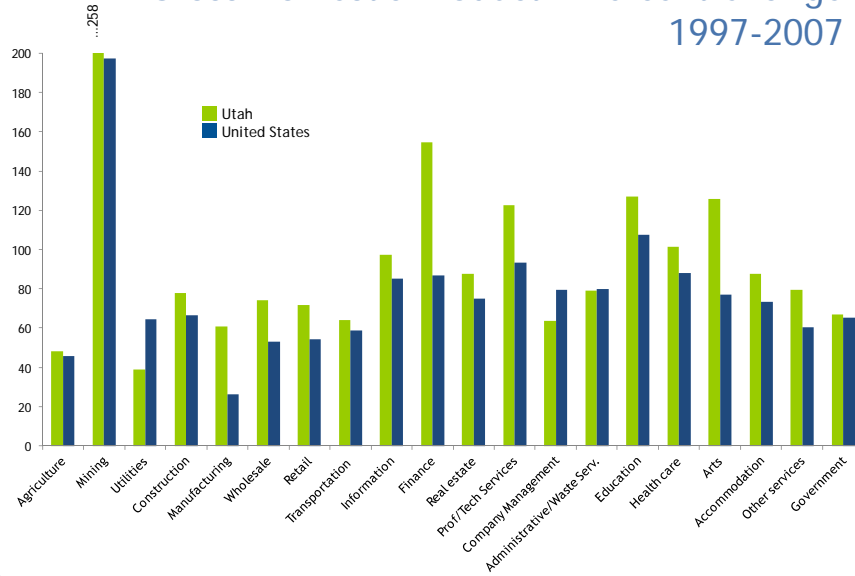


Percent Change in Gross State Product, 1997-2007



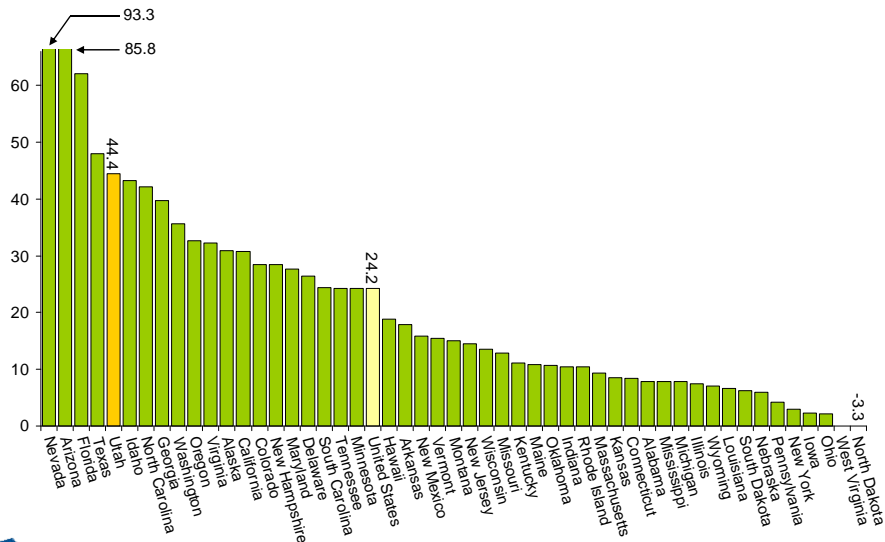
Source: Bureau of Economic Analysis, U.S. Department of Commerce

Gross Domestic Product – Percent Change 1997-2007



Source: Bureau of Economic Analysis, U.S. Department of Commerce

Population Projections - Percent Change, 2000-25



Source: U.S. Census Bureau

Utah Rankings on Key New Economy Scales

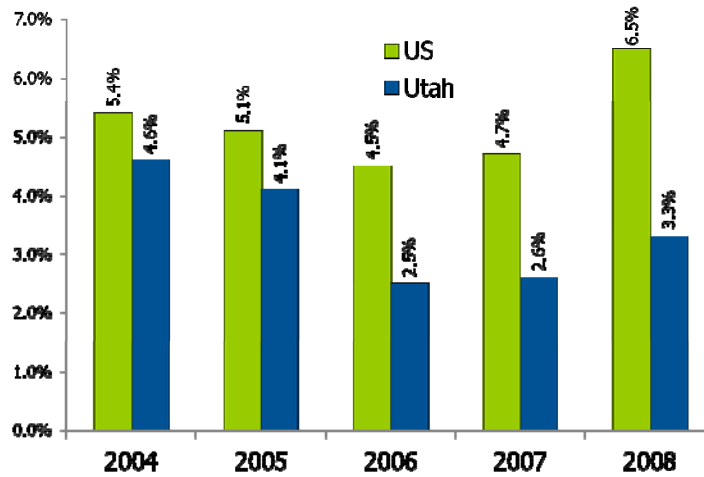
Overall Ranking	12
IT Professionals	19
Workforce Education	15
"Gazelle" Jobs	17
Fastest Growing Firms	4
Entrepreneurial Activity	17
Inventor Patents	2
High Tech Jobs	10
Scientists & Engineers	20
Patents	19
Industry Investment in R&D	28
Venture Capital	5
Technology in Schools	50



Source: The 2007 State New Economy Index

Unemployment Rate – US vs. Utah

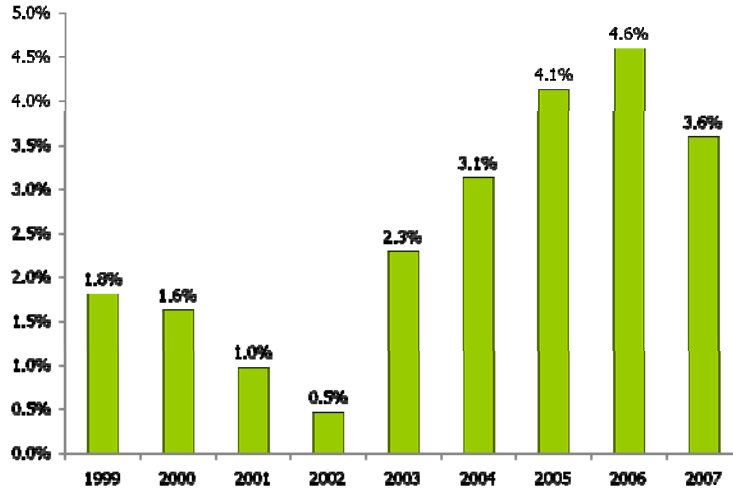
September 2004 - September 2008



Source: US Department of Labor Bureau of Labor Statistics, Oct. 08

Year-to-Year Employment Growth

Utah, 1999-2007



Source: US Department of Labor Bureau of Labor Statistics, Oct. 08

Development Report Card for the States, 2007 - Utah

Utah Strengths (Top 10 Rankings)

Rank	Measure
1	Charitable Giving
1	Electronic Public Services
2	Industrial Diversity
4	Change in Toxic Release Inventory
4	Initial Public Offerings
5	Employment Growth: Long Term
5	Business Created via University R&D
5	Employment Growth: Short Term
5	Infant Mortality
5	Heart Disease
5	High School Attainment
6	Venture Capital Investments
6	Private Sector Layoffs
7	SBIC Financing
7	Royalties and Licenses
8	New Companies
8	Conversion of Cropland to Other Uses
8	Bridge Deficiency
9	Income Distribution
9	Energy Costs
10	Graduate Students in Science and Engineering
10	Poverty Rate

Utah Weaknesses (Bottom 10 Rankings)

Rank	Measure
41	Income from Dividends, Interest and Rent
42	Use of Alternative Energy
43	Average Annual Pay Growth
44	Change in Average Annual Pay
44	Change in Private Research and Development
45	Average Teacher Salary
48	Toxic Release Inventory
49	Business Closings
50	K-12 Education Expenditures

Overall	
Performance	B
Employment	A
Earnings & Job Quality	C
Equity	B
Quality of Life	A
Resource Efficiency	D
Business Vitality	B
Competitiveness/Existing Businesses	D
Entrepreneurial Energy	A
Development Capacity	A
Human Resources	C
Financial Resources	C
Infrastructure Resources	A
Amenity Resources & Natural Capital	B
Innovation Assets	B



Source: 2007 Development Report Card for the States, CFED

In comparison to most other US states,
Utah is doing extraordinarily well.

But the World, not the U.S., is
the new basis of comparison.

In this context, Utah
still has work to do.



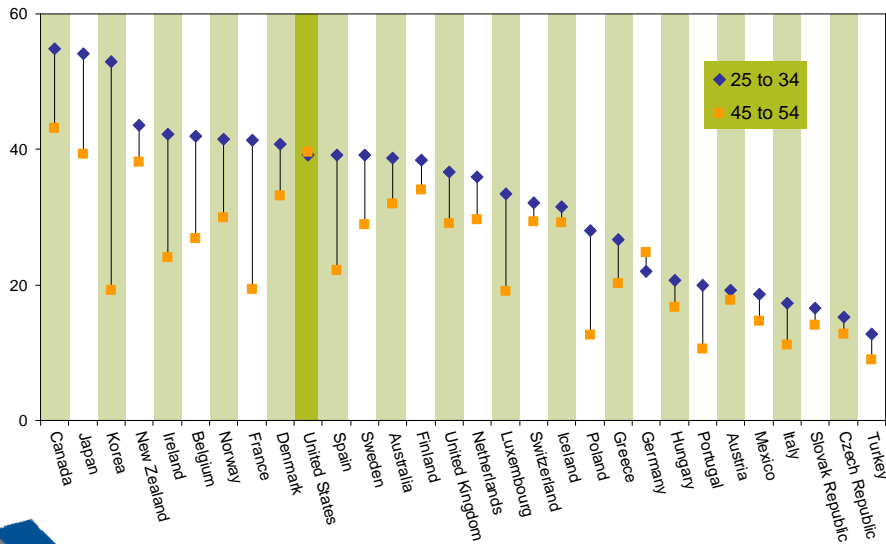
SOME PROBLEMS CONFRONTING UTAH



Maintaining a Globally Competitive Workforce



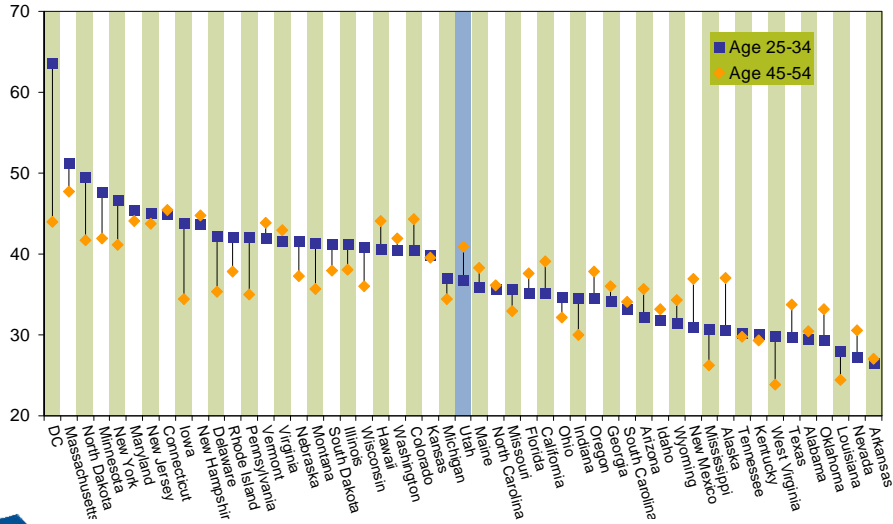
Differences in College Attainment (Associate & Higher) Between Younger & Older Adults—U.S. & OECD Countries, 2006



Source: Organisation for Economic Co-operation and Development (OECD), *Education at a Glance 2008*



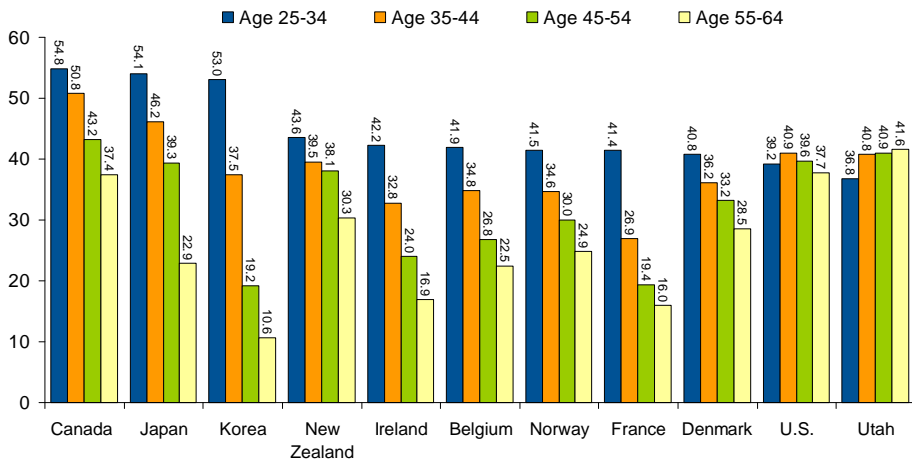
Differences in College Attainment (Associate & Higher) Between Younger & Older Adults - U.S., 2006



Source: U.S. Census Bureau, 2006 American Community Survey (ACS)



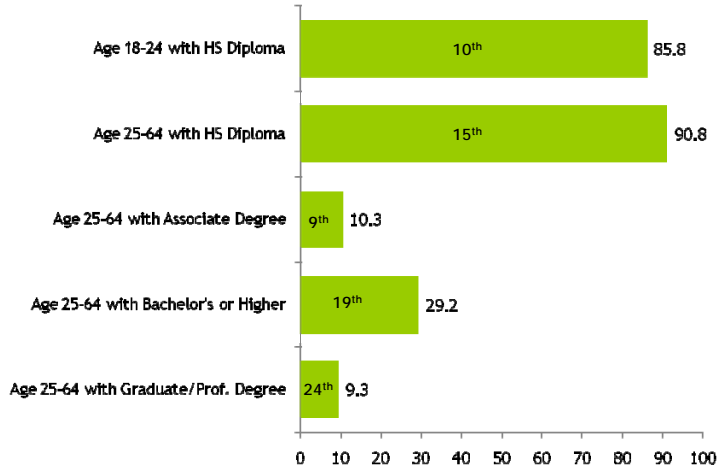
Percent of Adults with an Associate Degree or Higher by Age Group - Utah, U.S. & Leading OECD Countries



Source: OECD, Education at a Glance 2008

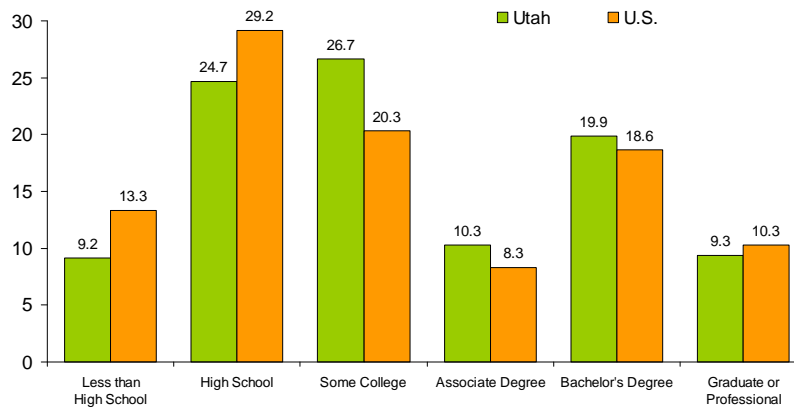


Educational Attainment and Rank Among States Utah, 2006 (Percent)



Source: U.S. Census Bureau, 2006 ACS

Educational Attainment of Population Age 25-64, 2006



Source: U.S. Census Bureau, 2006 ACS Public Use Microdata Samples (PUMS)

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The Goal: Utah Reaching International Competitiveness by 2025

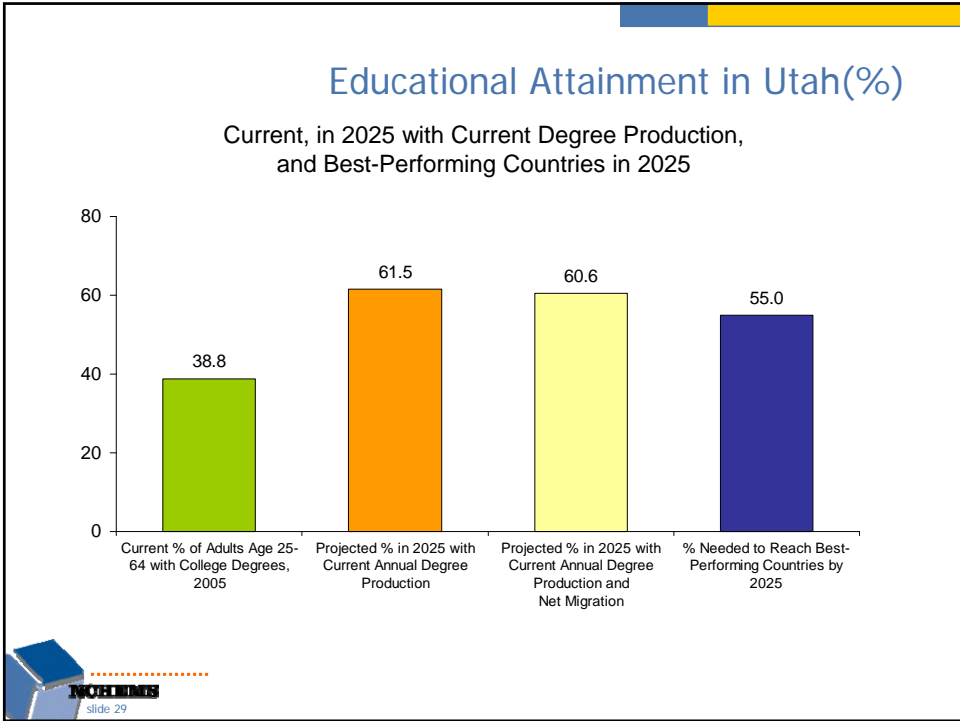
55% of
Population
Age 25-64 with
College Degrees



Reaching Top Performance by 2025 (55%), Utah

796,591	Number of Individuals to Match Best-Performing Countries (55%)
276,707	Number of Individuals (Age 25-44) Who Already Have Degrees
519,884	Additional Production Needed (2005 to 2025)
614,280	Degrees Produced at Current Annual Rate of Production

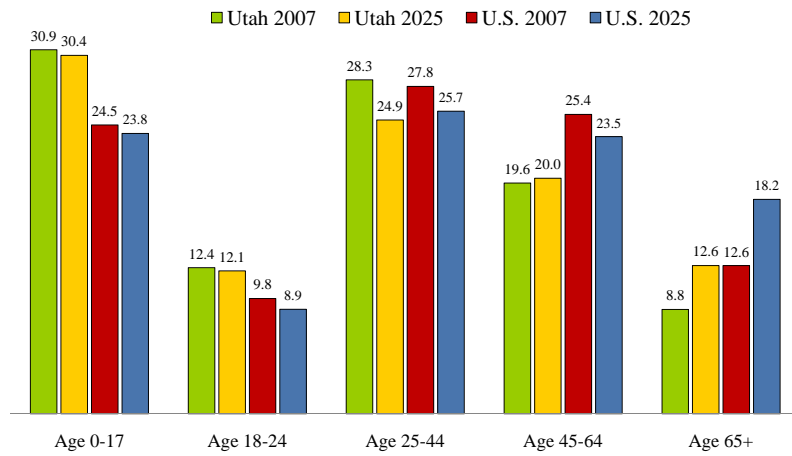




DEALING WITH A MORE DIVERSE POPULATION

NOCHINS
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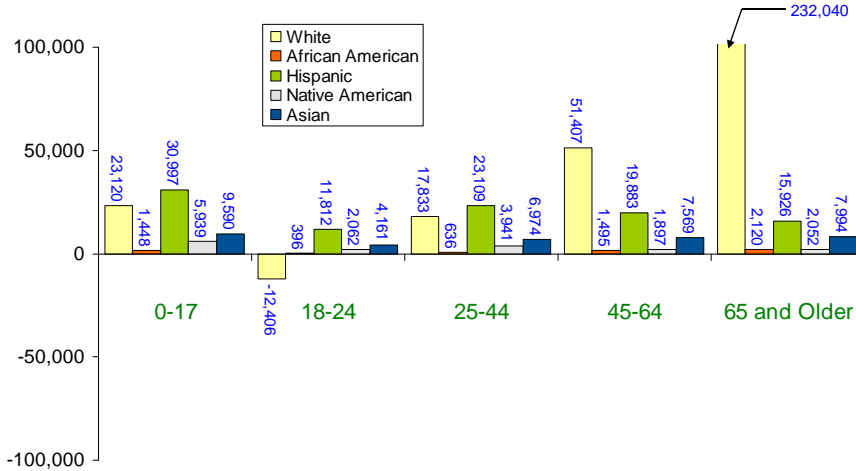
Population Distribution by Age Group, Estimated 2007 & Projected 2025



Source: U.S. Census Bureau, State Population Estimates and Projections.



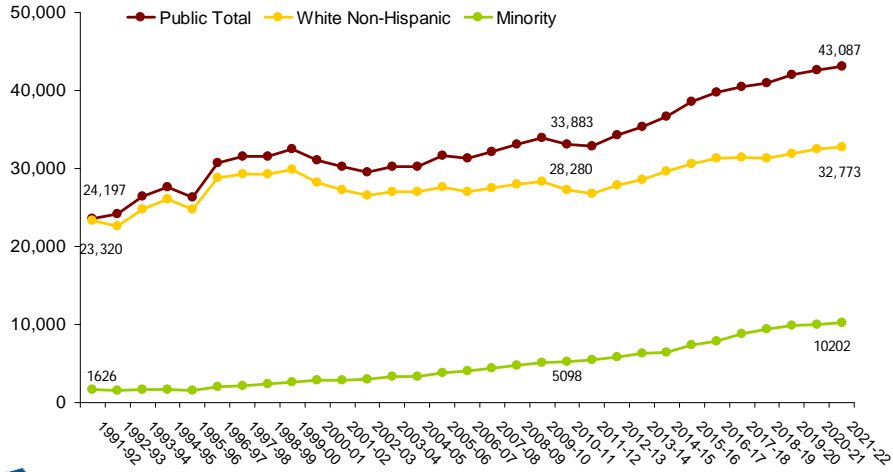
Projected Change in Utah Population by Age & Race/Ethnicity, 2005-25 (in Thousands)



Source: U.S. Census Bureau

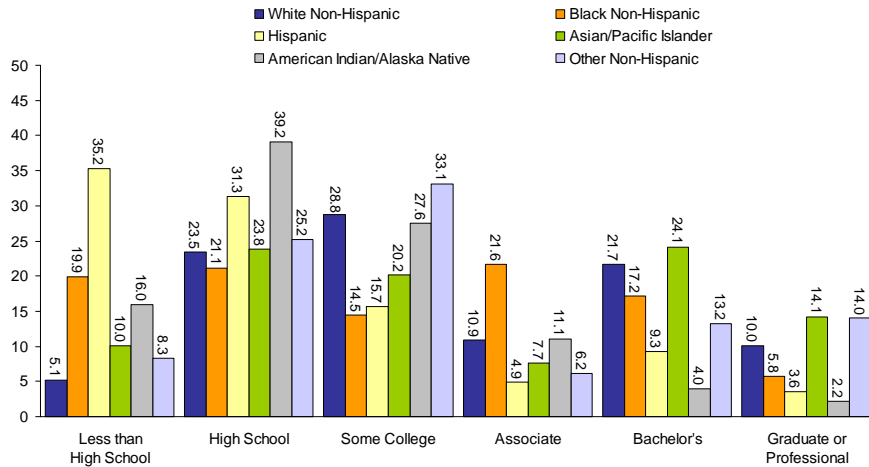


Utah Public High School Graduates by Race/Ethnicity, 1991-2005 (actual) and 2006-2022 (projected)



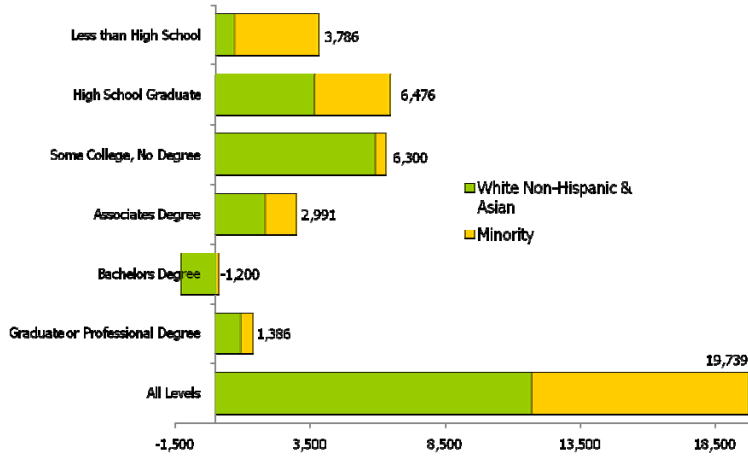
Source: Western Interstate Commission for Higher Education (WICHE), 2007

Percent Educational Attainment of Population Age 25-64 By Race/Ethnicity - Utah, 2006



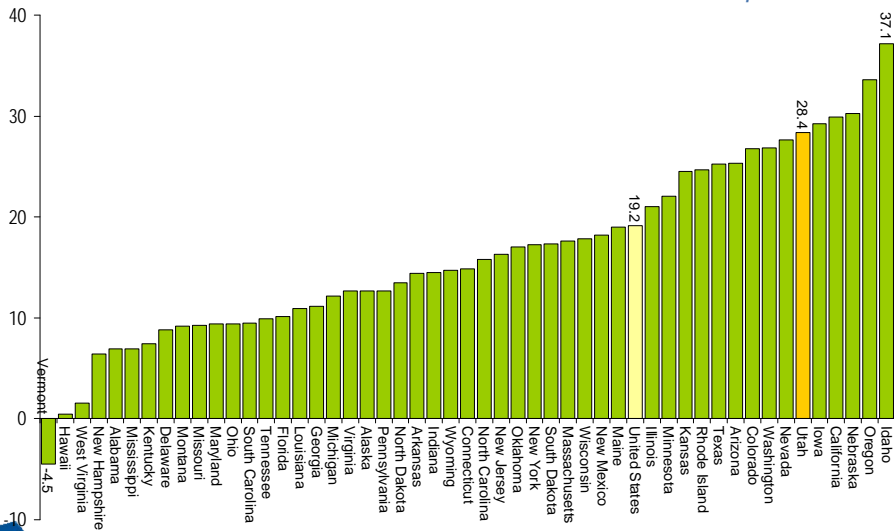
Source: U.S. Census Bureau, 2006 ACS PUMS

Utah Net Migration of Residents Age 22-64 by Race & Level of Education, 2006



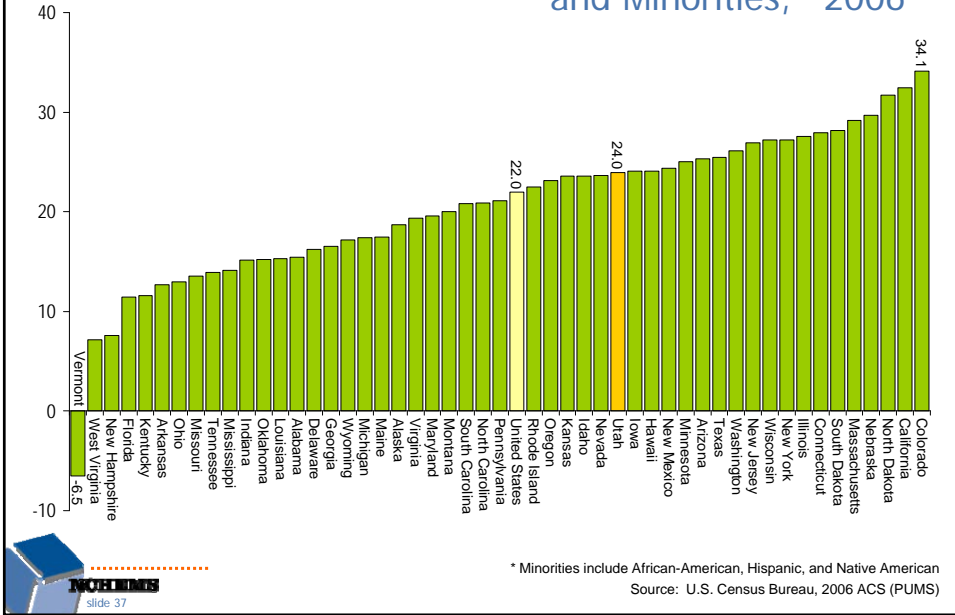
Source: U.S. Census Bureau, 2006 ACS PUMS

Difference in High School Attainment Between Whites and Minorities, * 2006



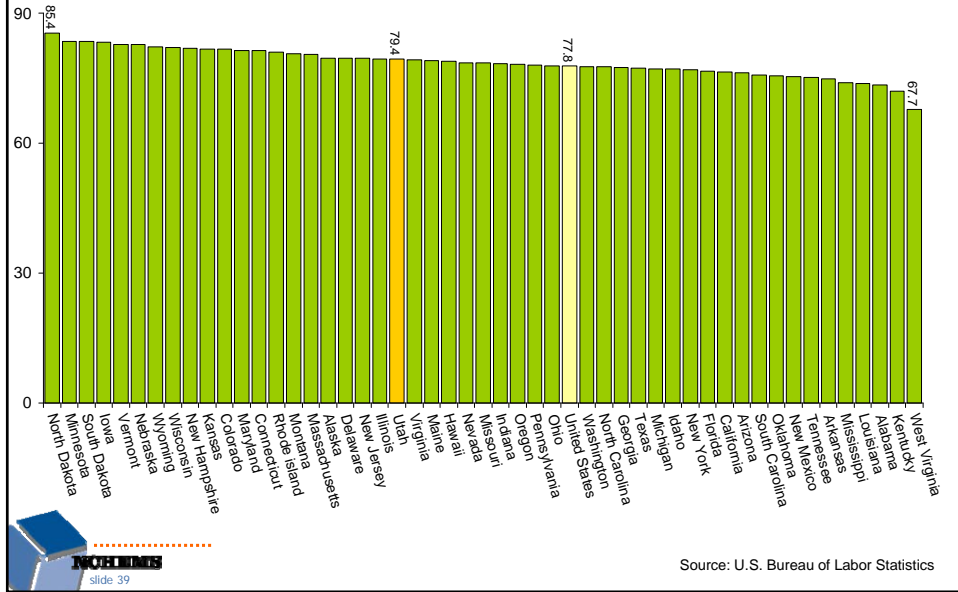
* Minorities include African-American, Hispanic, and Native American
Source: U.S. Census Bureau, 2006 ACS PUMS

Difference in College Attainment Between Whites and Minorities, * 2006

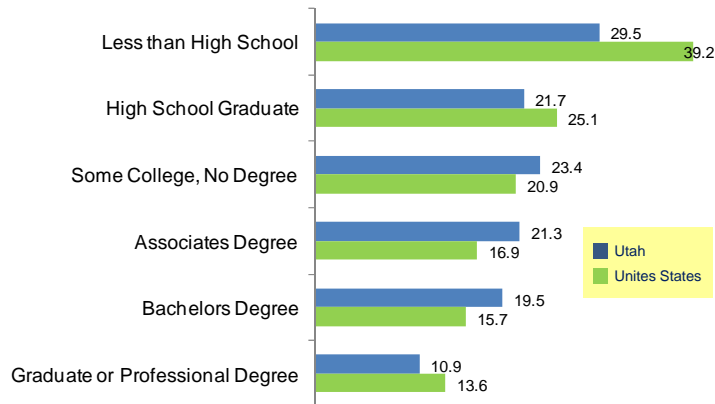


Creating a Sufficient Number of High Wage Jobs to Effectively Utilize the Skills of the Population

Percent of Civilian Population Age 25-64 Participating in the Workforce, 2005

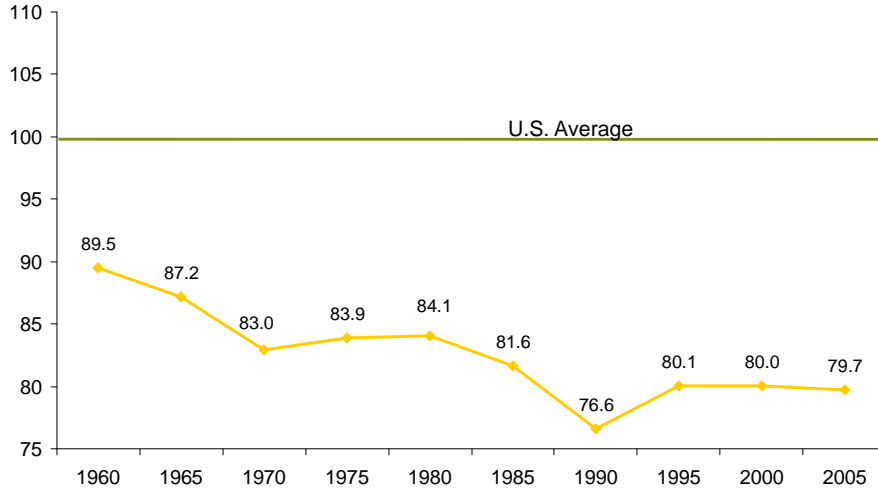


Percent of Civilians Age 25-64 Not in the Workforce, 2006 listed by Education Attainment



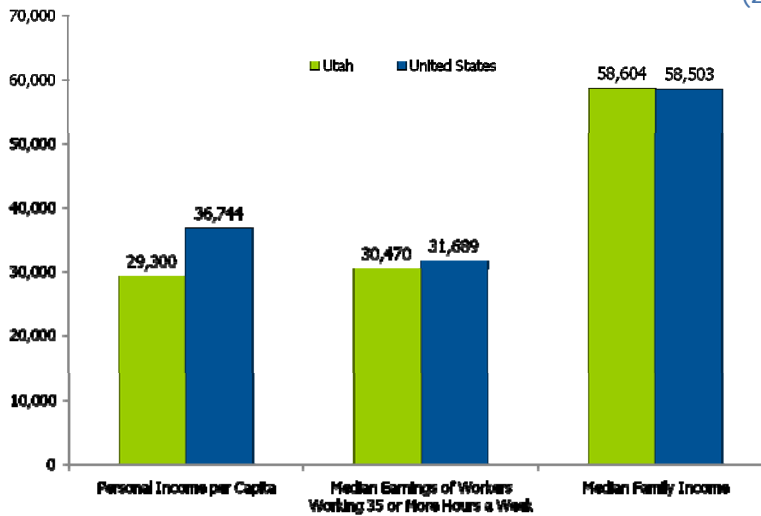
Source: U.S. Census Bureau, 2006 ACS PUMS

Per Capita Personal Income as a Percent of U.S. Average - Utah, 1960-2005



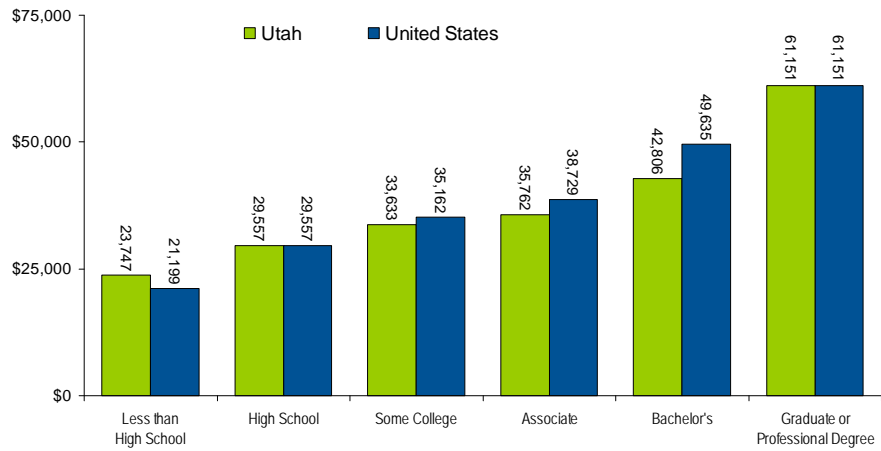
Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Dept. of Commerce

Measures of Income – Utah vs. U.S. Average (2007)



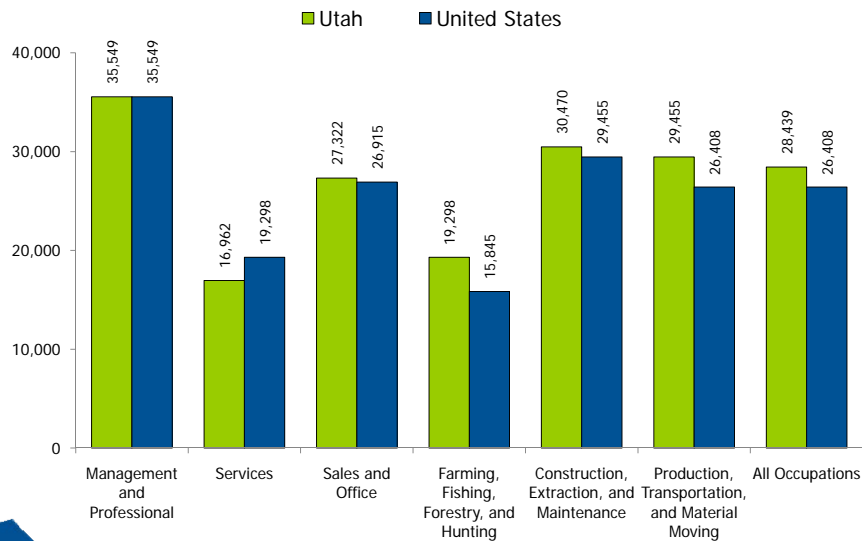
Source: U.S. Bureau of Economic Analysis; Census Bureau, American Community Survey (Public Use Microdata Samples)

Median Earnings of Population Age 25-64 by Level of Education, 2005

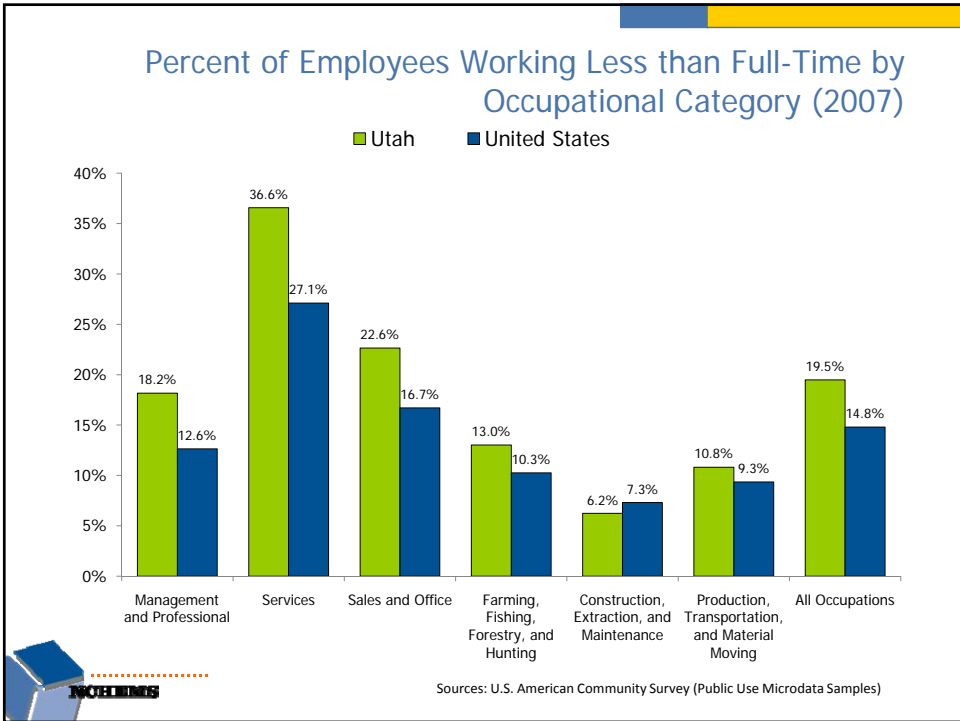
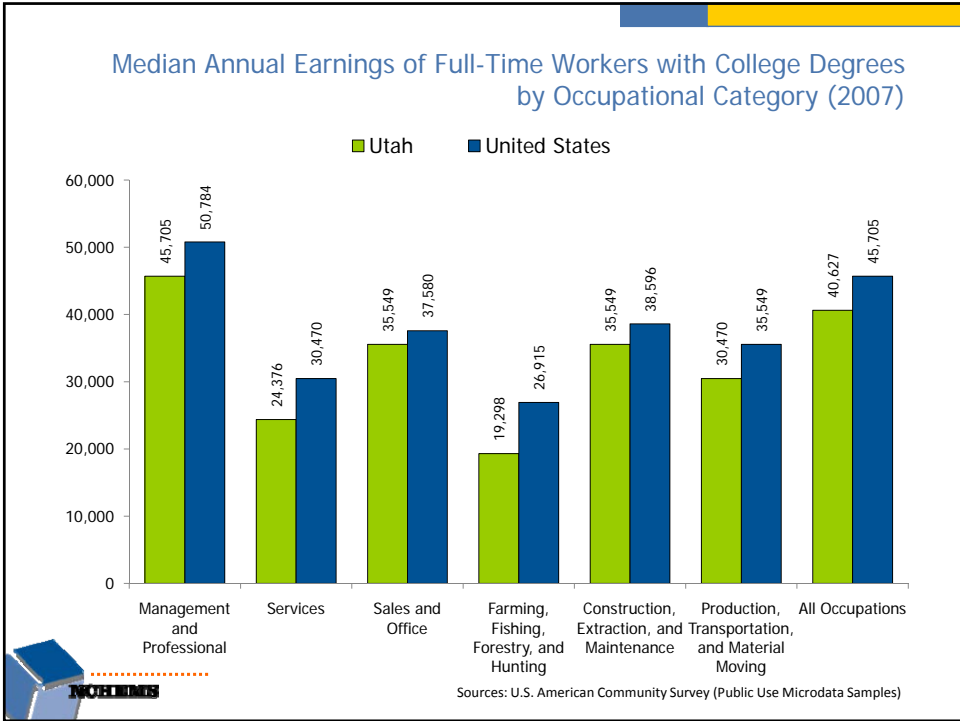


Source: U.S. Census Bureau, ACS

Median Annual Earnings of Full-Time Workers with No College Degree by Occupational Category (2007)

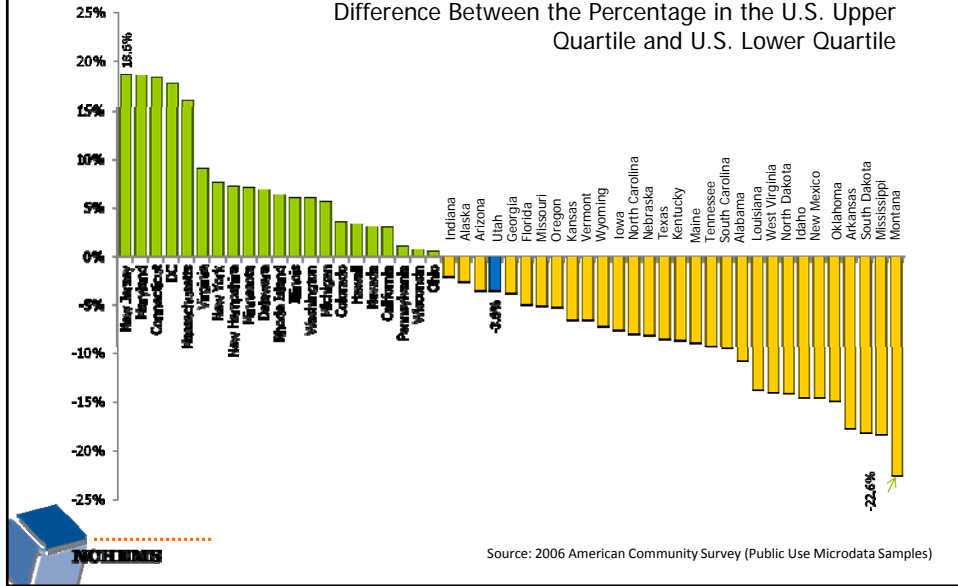


Sources: U.S. American Community Survey (Public Use Microdata Samples)

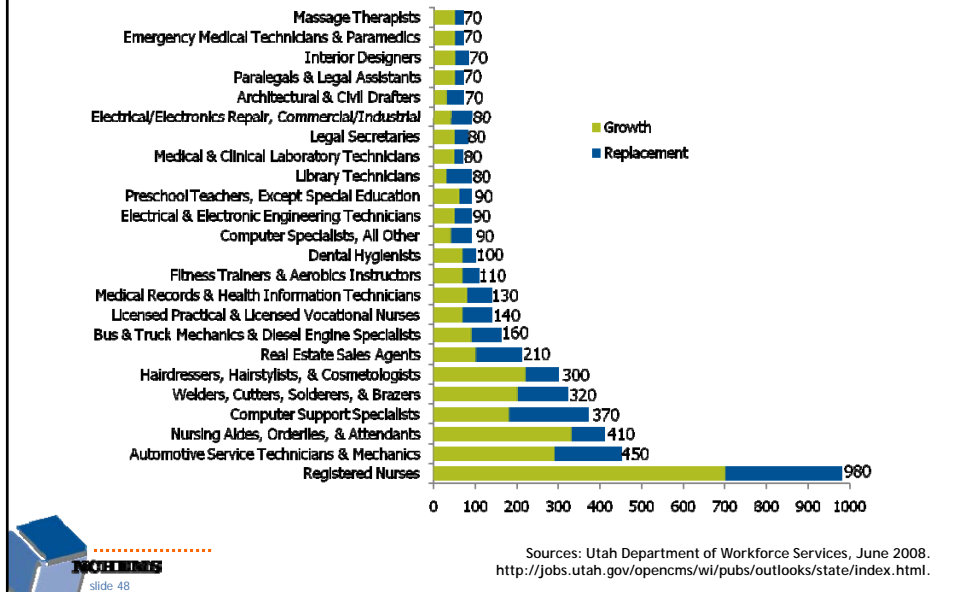


Percentage of Full-Time Employees with Earnings in the U.S. Quartiles (2006)

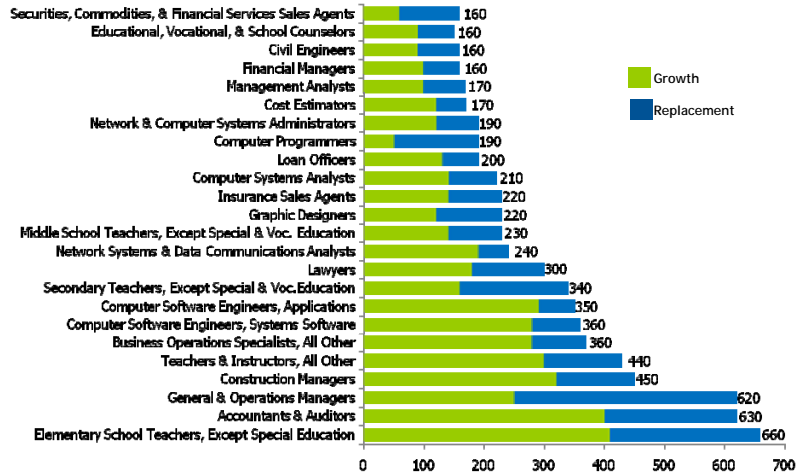
Difference Between the Percentage in the U.S. Upper Quartile and U.S. Lower Quartile



Occupations with Most Average Annual Openings, from 2006-2016, Some College or Associate Degree Required, Utah

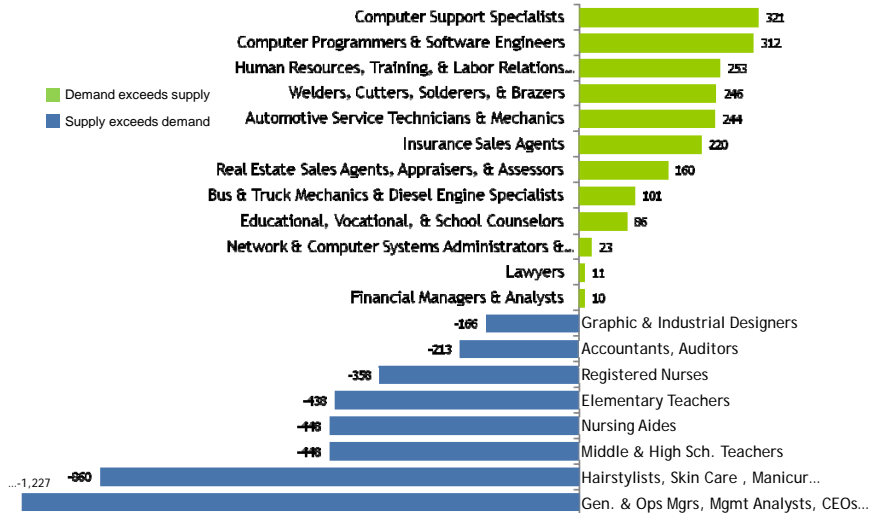


Occupations with Most Average Annual Openings, from 2006-2016, Bachelor's Degree or Higher Required, Utah



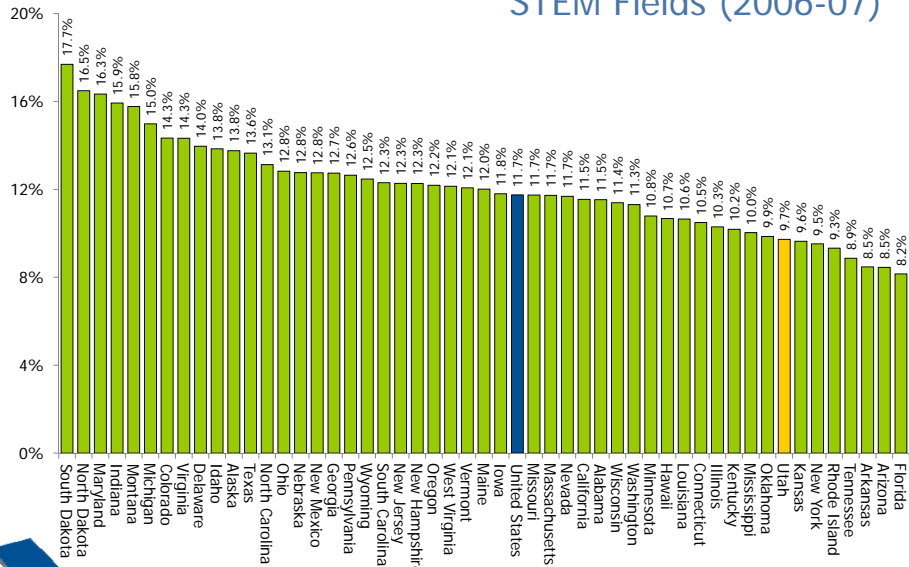
Sources: Utah Department of Workforce Services, June 2008.
<http://jobs.utah.gov/opencms/wi/pubs/outlooks/state/index.html>

Utah Supply Gap in High Demand Occupations (Average Annual Openings Less Average Annual Postsecondary Awards)



Sources: Utah Department of Workforce Services, June 2008. <http://jobs.utah.gov/opencms/wi/pubs/outlooks/state/index.html>. NCES, IPEDS 2005-2007 Completions Files; c2005_a and c2006_a Final Release Data Files, c2007a Early Release Data File.

Percentage of Degrees and Certificates Awarded in STEM Fields (2006-07)



Sources: NCES, IPEDS Completions Survey

Preparation

	Utah		Top States
	Early 1990s*	2008	
High School Completion (25%)			
18- to 24-year-olds with a high school credential	94%	91%	95%
K-12 Course Taking (30%)			
9th to 12th graders taking at least one upper-level math course	45%	69%	64%
9th to 12th graders taking at least one upper-level science course	20%	29%	46%
8th grade students taking algebra	n/a	47%	47%
K-12 Student Achievement (35%)			
8th graders scoring at or above "proficient" on the national assessment exam in math	22%	32%	41%
8th graders scoring at or above "proficient" on the national assessment exam in reading	31%	30%	39%
8th graders scoring at or above "proficient" on the national assessment exam in science	32%	33%	41%
8th graders scoring at or above "proficient" on the national assessment exam in writing	21%	31%	46%
Low-income 8th graders scoring at or above "proficient" on the national assessment exam in math	17%	19%	24%
Number of scores in the top 20% nationally on SAT/ACT college entrance exam per 1,000 high school graduates	142	201	265
Number of scores that are 3 or higher on an Advanced Placement subject test per 1,000 high school juniors and seniors	155	166	237
Teacher Quality (10%)			
7th to 12th graders taught by teachers with a major in their subject	n/a	77%	83%

*The indicators report data beginning in the early 1990s or the closest year for which reliable data are available. See the *Technical Guide for Measuring Up 2008*.

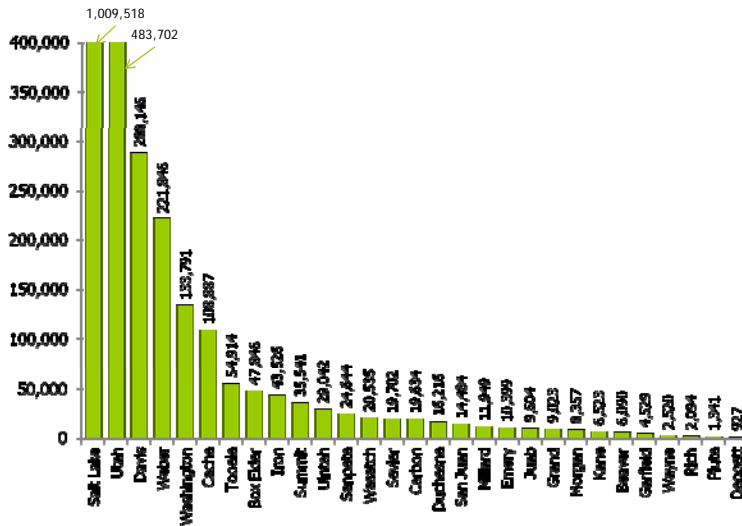
Source: Measuring Up 2008, www.highereducation.org

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ENSURING THE SUCCESS OF ALL REGIONS OF UTAH



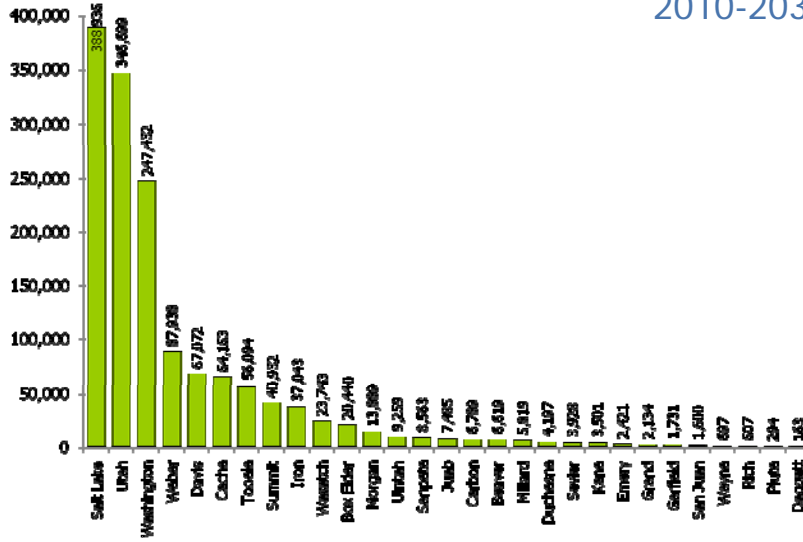
Utah County Population Estimates (2007)



Source: U.S. Census Bureau County Population Estimates;
<http://www.census.gov/popest/datasets.html>



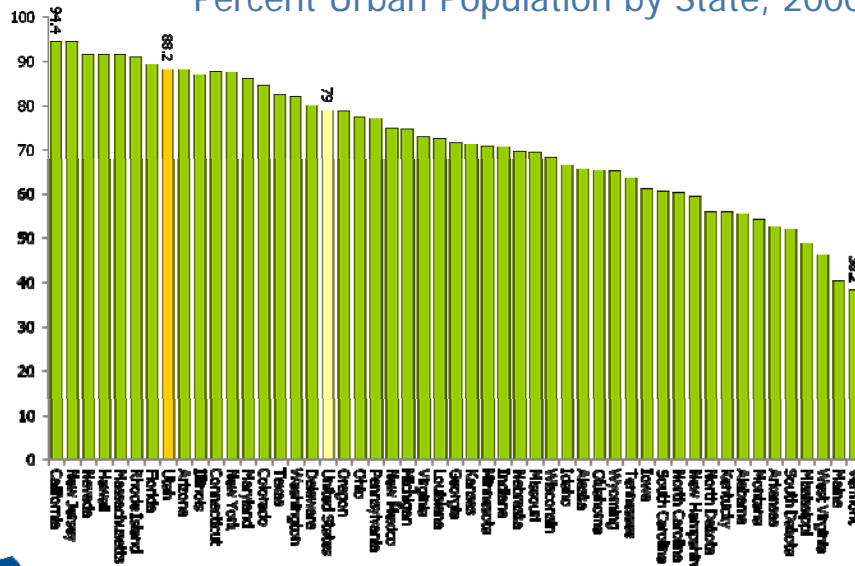
Utah County Projected Population Growth, 2010-2030



Source: State of Utah, Governor's Office of Planning and Budget, 2008 Baseline Projections, <http://www.governor.utah.gov/dea/projections.html>



Percent Urban Population by State, 2000

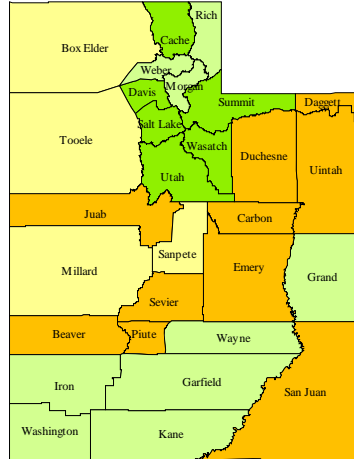


Source: US Census Bureau, 2000 Census



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Percent of Population Age 25-64 with a Bachelor's Degree or Higher, 2000



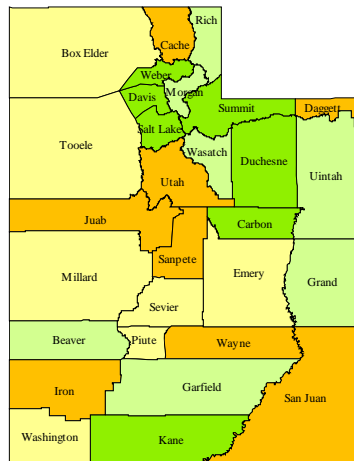
Utah (State) = 27.4
 Summit (High County) = 46.8
 Juab (Low County) = 11.6

- 25.7 to 46.8
- 20.8 to 25.7
- 16.7 to 20.8
- 11.6 to 16.7



Source: U.S. Census Bureau, 2000 Census

Per Capita Personal Income, 2006



Utah (State) = \$29,406
 Summit (High County) = \$57,725
 San Juan (Low County) = \$16,569

- 28,213 to 57,725
- 24,836 to 28,213
- 22,699 to 24,836
- 16,569 to 22,699



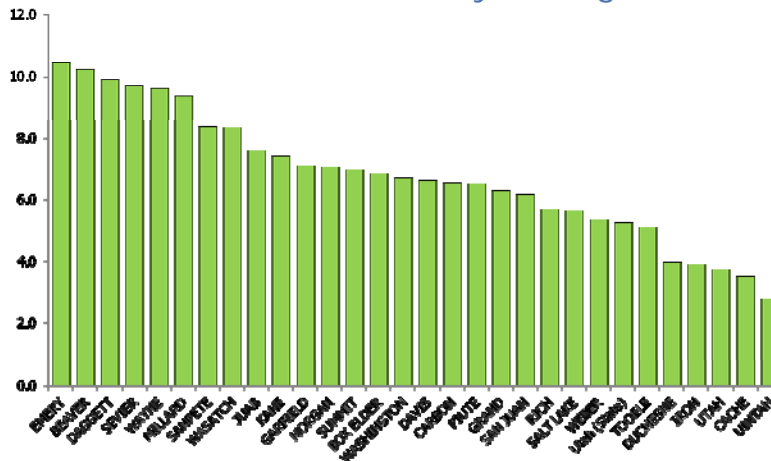
Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

Percent of First-Time Freshman by County of Origin and County of USHE Institution Attended, Fall 2008

County of Origin	Enrolling Institution and County Location							
	Dixie State College (Washington)	University of Utah, Salt Lake CC (Salt Lake)	College of Eastern Utah (Carbon)	Utah State University (Cache)	Southern Utah University (Iron)	Snow College (Sanpete)	Weber State University (Weber)	Utah Valley University (Utah)
BEAVER	7.0	3.5	0.0	8.8	61.4	8.8	0.0	10.5
BOX ELDER	6.8	5.4	2.0	48.7	3.7	9.6	17.6	6.2
CACHE	2.1	4.4	0.3	80.1	2.6	3.6	4.3	2.6
CARBON	0.0	4.5	87.5	1.7	1.7	0.6	1.1	2.8
DAGGETT	0.0	25.0	0.0	25.0	0.0	25.0	0.0	25.0
DAVIS	2.8	23.9	1.2	18.6	3.5	2.7	41.6	5.6
DUCHESNE	5.6	9.9	14.1	19.7	7.0	22.5	1.4	19.7
EMERY	0.0	4.1	62.3	6.6	9.8	12.3	0.8	4.1
GARFIELD	21.9	6.3	3.1	0.0	37.5	28.1	0.0	3.1
GRAND	2.0	20.0	14.0	12.0	24.0	12.0	0.0	16.0
IRON	4.1	3.2	0.0	4.1	82.2	2.9	0.0	3.5
JUAB	5.5	4.1	2.7	4.1	13.7	38.4	4.1	27.4
KANE	44.2	9.6	0.0	5.8	34.6	0.0	1.9	3.8
MILLARD	11.4	1.5	2.3	9.1	30.3	28.0	3.0	14.4
MORGAN	0.0	3.8	1.3	11.4	11.4	10.1	55.7	6.3
PIUTE	0.0	12.5	0.0	0.0	50.0	37.5	0.0	0.0
RICH	0.0	0.0	0.0	50.0	25.0	0.0	8.3	16.7
SALT LAKE	2.8	73.1	0.5	7.2	3.6	3.4	2.2	7.2
SAN JUAN	1.8	6.3	64.9	4.5	14.4	4.5	0.0	3.6
SANPETE	0.9	2.3	1.7	2.3	5.5	81.6	0.6	5.2
SEVIER	4.0	3.5	3.5	5.1	16.2	56.1	1.0	10.6
SUMMIT	4.3	46.4	0.0	9.9	7.3	7.3	5.6	19.3
TOOELE	5.1	34.6	1.8	27.2	8.1	11.8	3.7	7.7
UINTAH	6.9	8.0	6.9	46.0	9.2	3.4	3.4	16.1
UTAH	2.5	6.0	0.9	7.0	4.3	7.1	1.1	71.0
WASATCH	3.5	8.8	0.6	13.5	9.4	11.8	2.9	49.4
WASHINGTON	78.4	2.9	0.1	1.7	9.4	1.6	0.7	5.2
WAYNE	8.7	0.0	0.0	0.0	21.7	47.8	4.3	17.4
WEBER	2.6	8.4	0.3	11.6	1.6	1.3	72.0	2.1
Total Entering Freshmen	7.3	32.5	2.6	13.0	6.5	7.0	12.5	18.6

MOHARRIS
slide 59

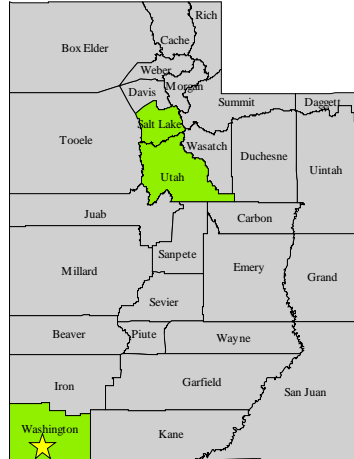
USHE First-Time Freshman Participation Rate by County of Origin, Fall 2008



*First time freshmen divided by 18-24 year olds

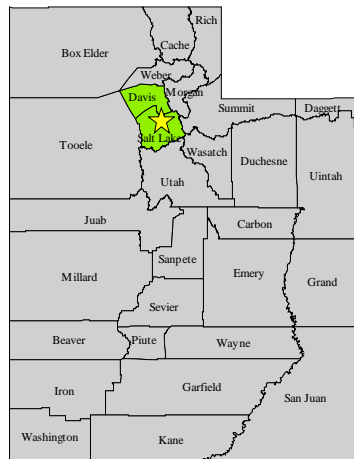
MOHARRIS
slide 60

Counties from Which Dixie State College Receives 80% of its First-time Freshman Enrollments, Fall 2008



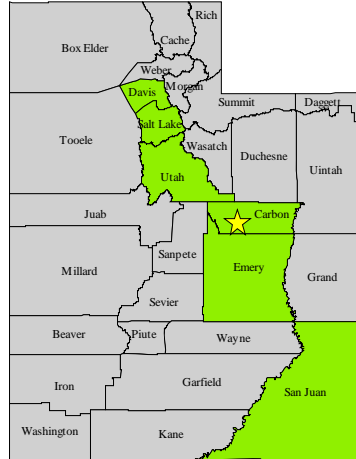
Source: Utah System of Higher Education

Counties from Which University of Utah Receives 80% of its First-time Freshman Enrollments, Fall 2008



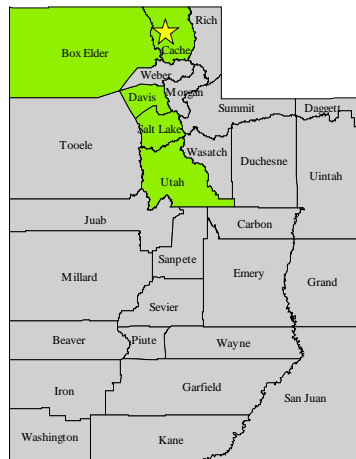
Source: Utah System of Higher Education

Counties from Which College of Eastern Utah Receives 80% of its First-time Freshman Enrollments, Fall 2008



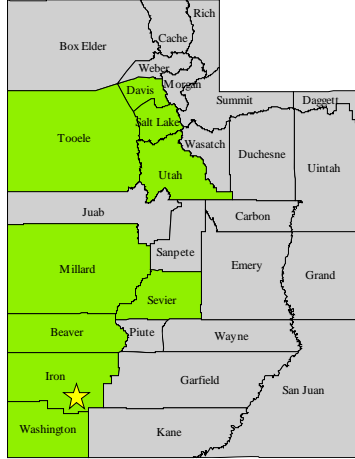
Source: Utah System of Higher Education

Counties from Which Utah State University Receives 80% of its First-time Freshman Enrollments, Fall 2008



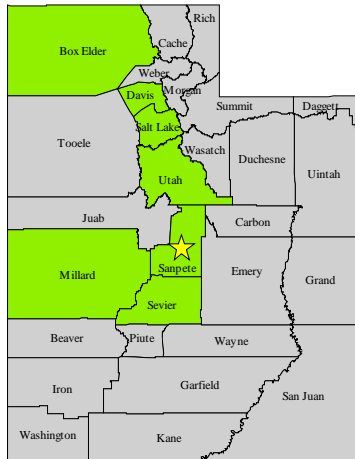
Source: Utah System of Higher Education

Counties from Which Southern Utah University Receives 80% of its First-time Freshman Enrollments, Fall 2008



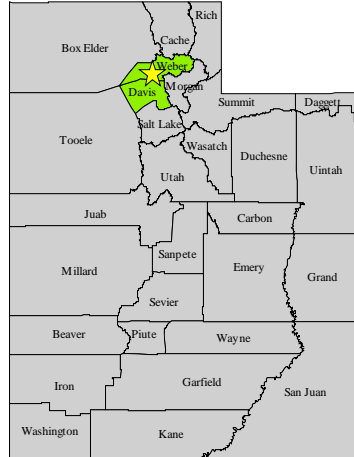
Source: Utah System of Higher Education

Counties from Which Snow College Receives 80% of its First-time Freshman Enrollments, Fall 2008



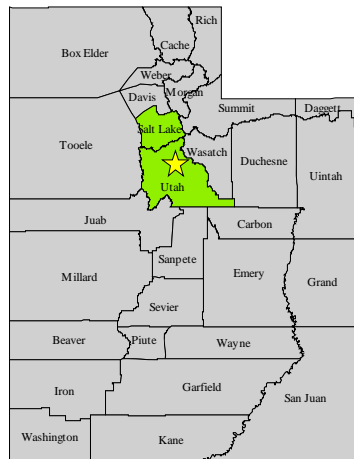
Source: Utah System of Higher Education

Counties from Which Weber State University Receives 80% of its First-time Freshman Enrollments, Fall 2008



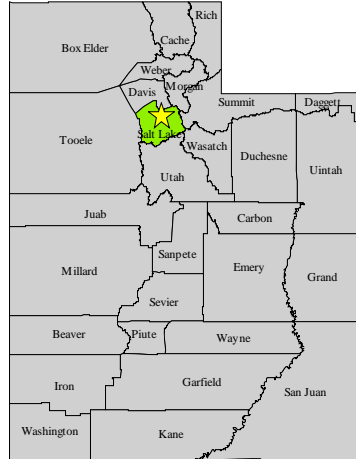
Source: Utah System of Higher Education

Counties from Which Utah Valley University Receives 80% of its First-time Freshman Enrollments, Fall 2008



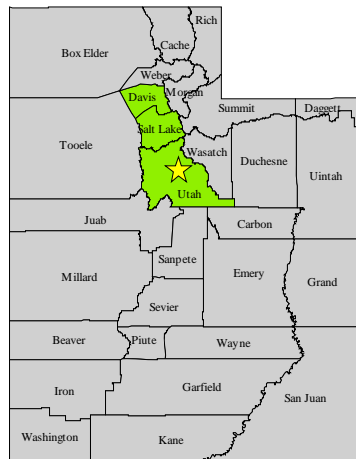
Source: Utah System of Higher Education

Counties from Which Salt Lake Community College Receives 80% of its First-time Freshman Enrollments, Fall 2008



Source: Utah System of Higher Education

Counties from Which Brigham Young University Receives 80% of its First-time Freshman Enrollments, Fall 2008



Source: Utah System of Higher Education

MOVING FROM GOOD TO GREAT IN EDUCATION



Utah Report Card, Measuring Up 2008

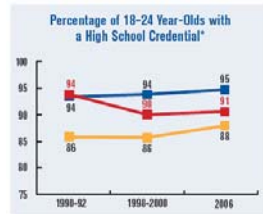
Performance Category	2008 Grade	Change Over Time
Preparation	B	↓
Participation	B-	↓
Affordability	F	↓
Completion	B+	↑
Benefits	B	↑
Learning	I	



Change Over Time Key Indicators Utah Report Card, Measuring Up 2008

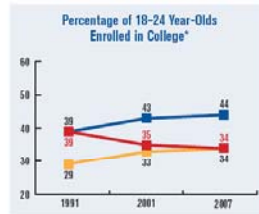
PREPARATION

The percentage of young adults in Utah who earn a high school diploma has decreased since the early 1990s. High school completion is above the U.S. average but below the top-performing states.

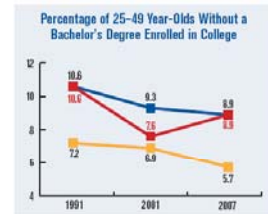


PARTICIPATION

College enrollment of young adults in Utah has declined since the early 1990s. Utah is at the national average but below the top states in the percentage of young adults enrolled.



The enrollment of working-age adults, relative to the number of residents without a bachelor's degree, has declined in Utah—as it has nationally and in the best-performing states. Utah is a top-performing state in this area.



LEGEND:

— & ■ = Utah

— & ■ = United States

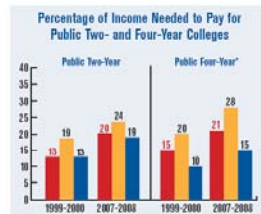
— & ■ = Median of Top Five States



Change Over Time Key Indicators Utah Report Card, Measuring Up 2008 (continued)

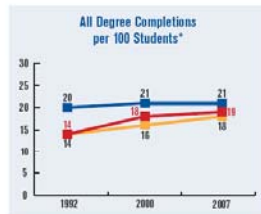
AFFORDABILITY

The share of family income, even after financial aid, needed to pay for college has risen substantially. To attend public two- and four-year colleges in Utah, students and families pay less than the U.S. average but more than those in the best-performing states.



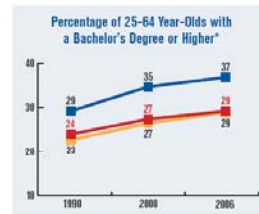
COMPLETION

The number of undergraduate credentials and degrees awarded in Utah, relative to the number of students enrolled, has increased since the early 1990s. Utah surpasses the U.S. average but is below the top states on this measure.



BENEFITS

The percentage of residents who have a bachelor's degree has increased. Utah is the same as the U.S. average but below the top states.



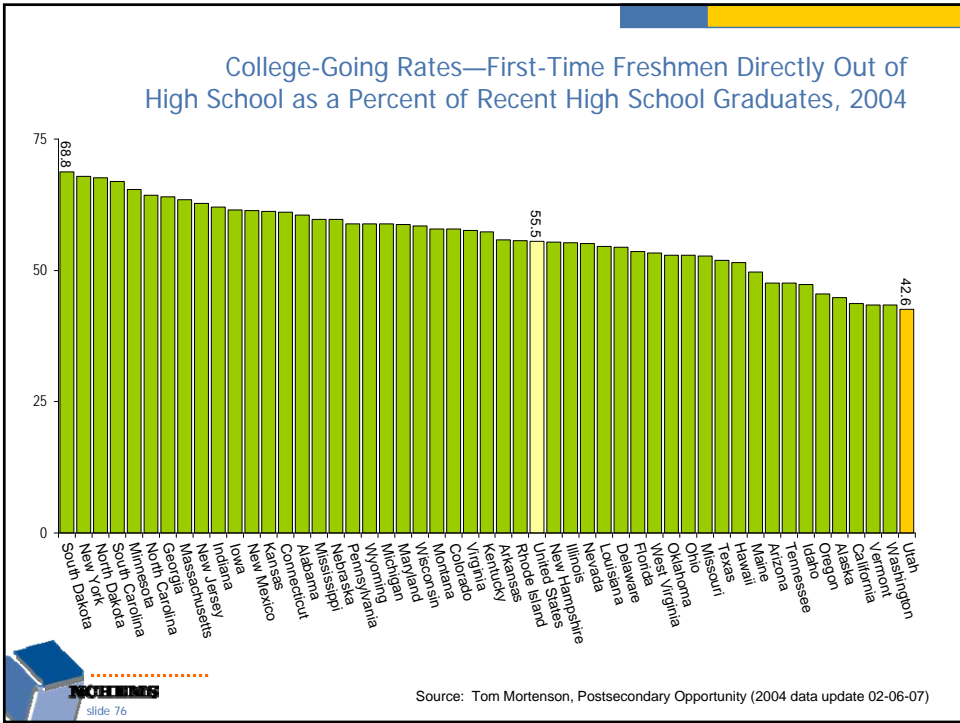
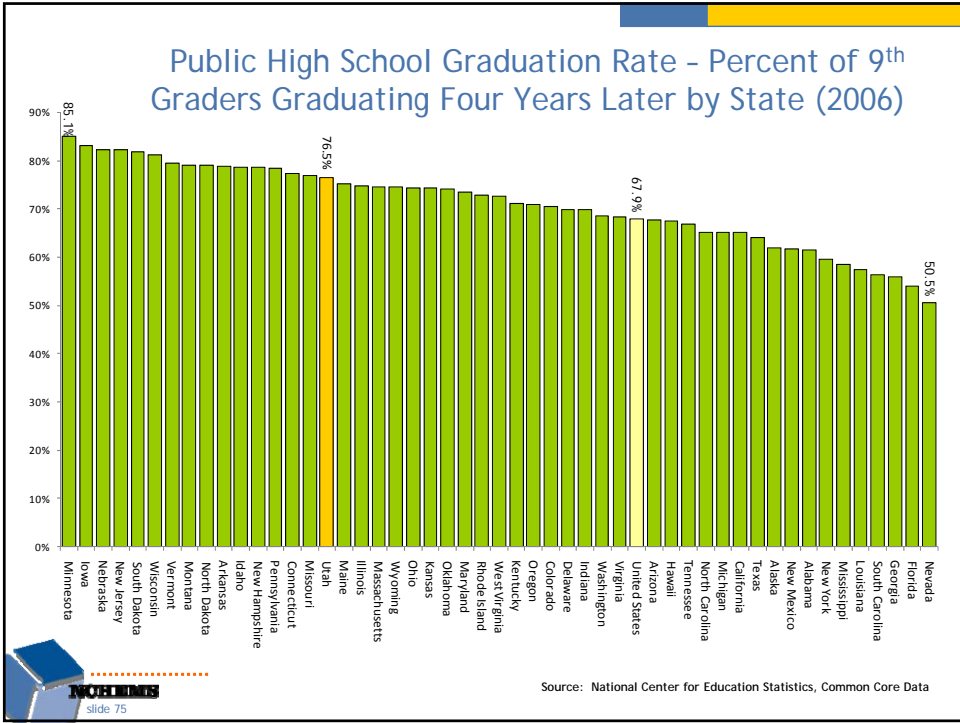
LEGEND:

— & ■ = Utah

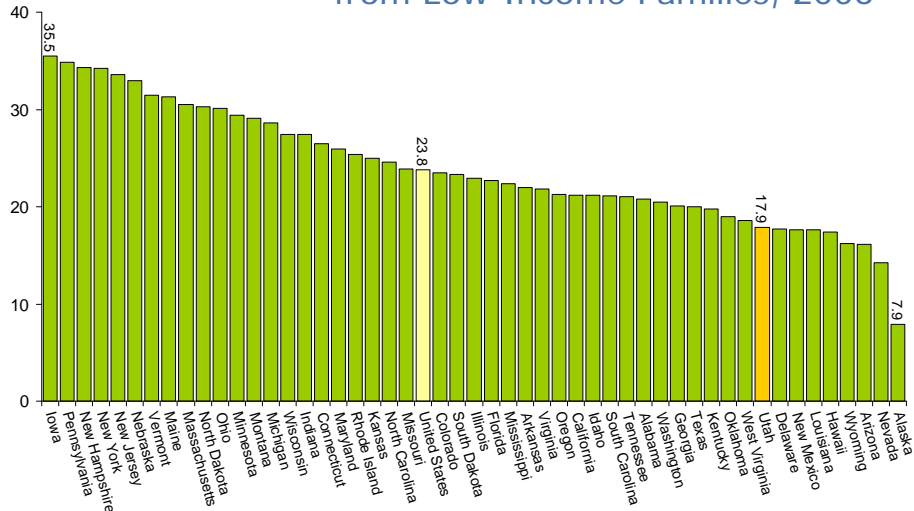
— & ■ = United States

— & ■ = Median of Top Five States





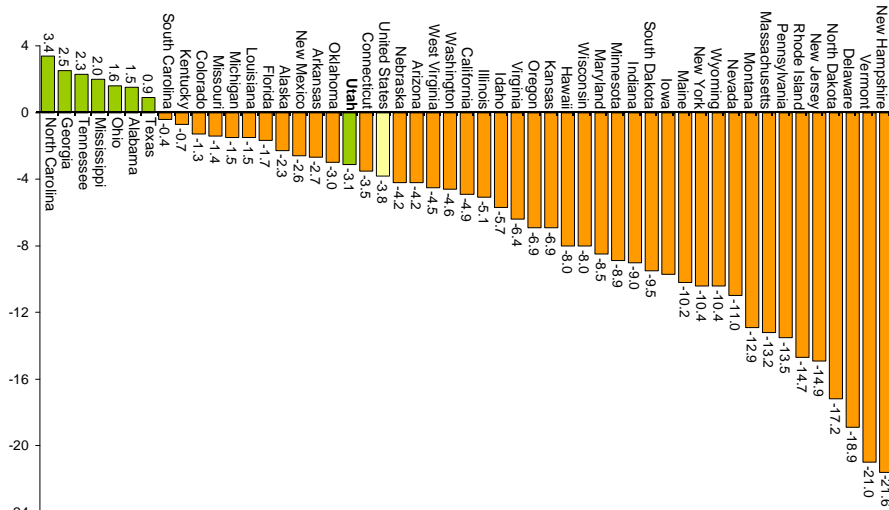
College Participation Rates by State for Students from Low-Income Families, 2006



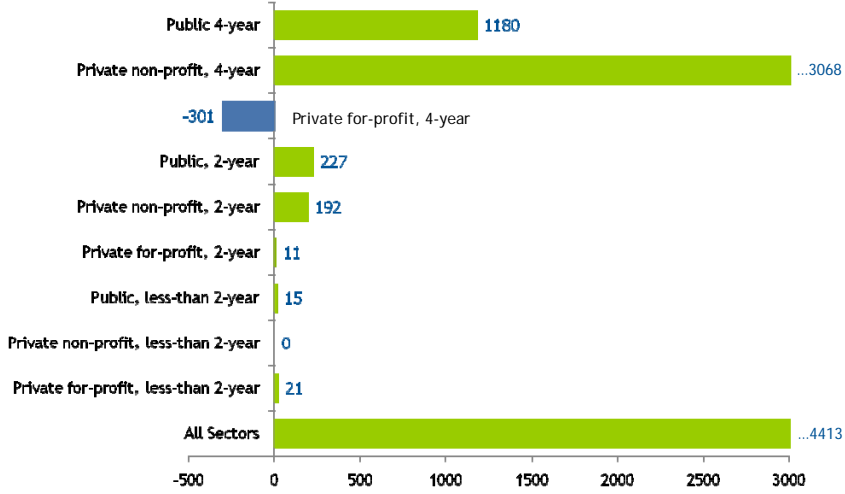
Source: Postsecondary Education Opportunity #188, February 2008



Change in College Participation Rates for Students from Low-Income Families by State, 1999-2006

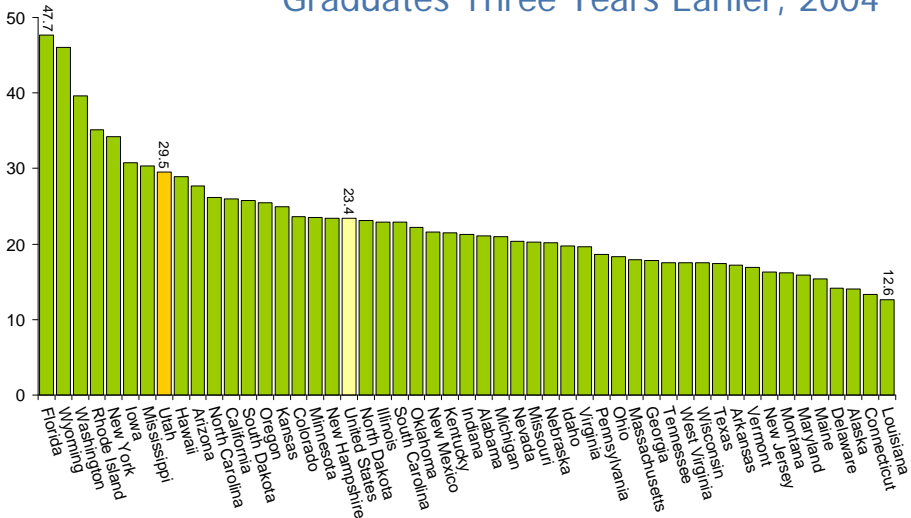


Utah Net Migration of First-time College Students by Sector (Fall 2006)

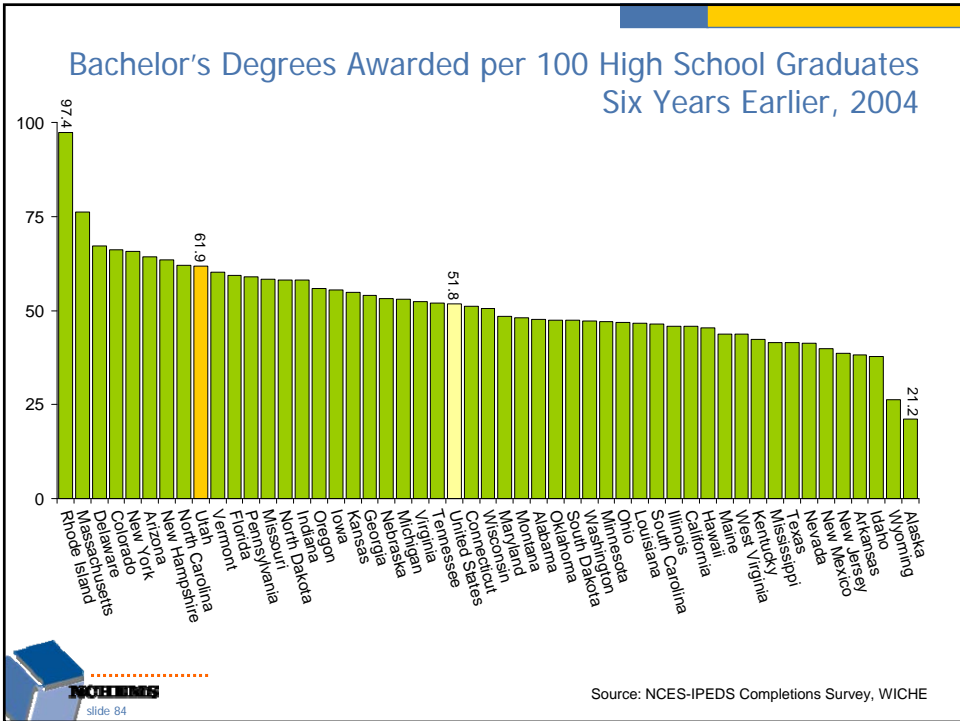
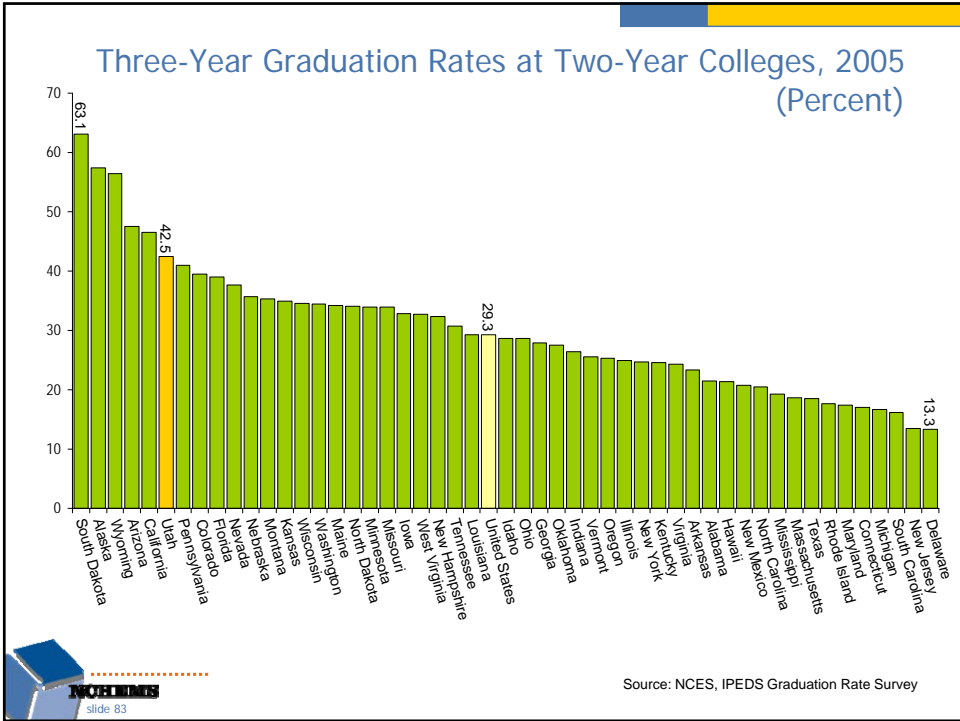


Source: NCHEMS NCES IPEDS Enrollment Survey, Part C, Fall 2006

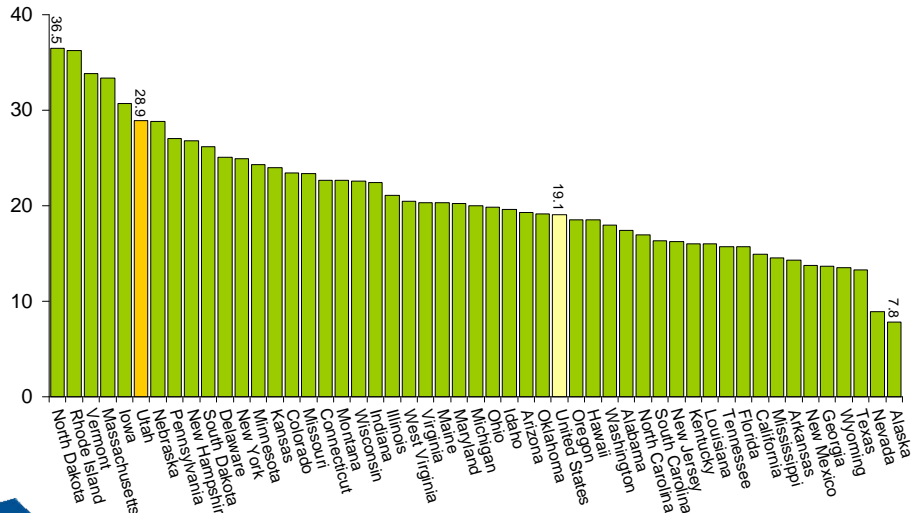
Associate Degrees Awarded per 100 High School Graduates Three Years Earlier, 2004



Source: NCES-IPEDS Completions Survey, WICHE

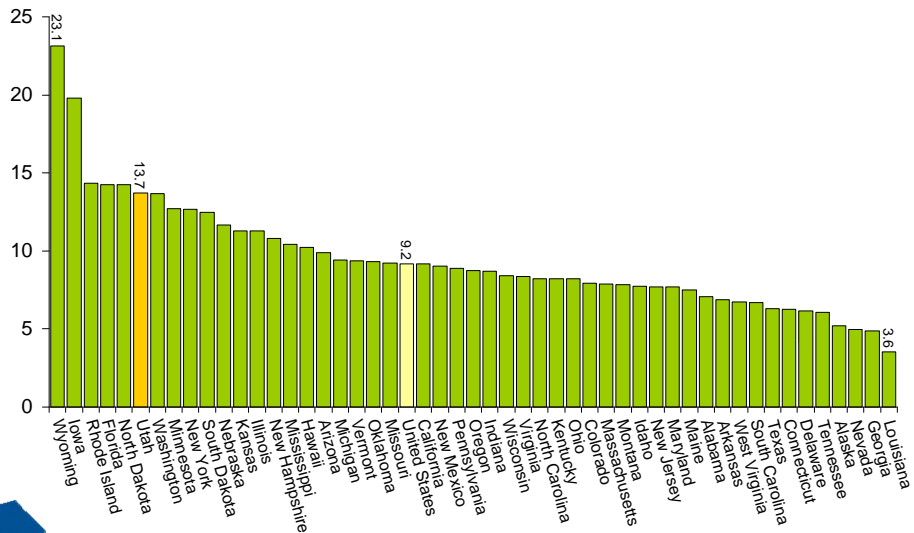


Bachelor's Degrees Awarded at All Colleges per 1,000 Adults Age 18-44 with No College Degree, 2006



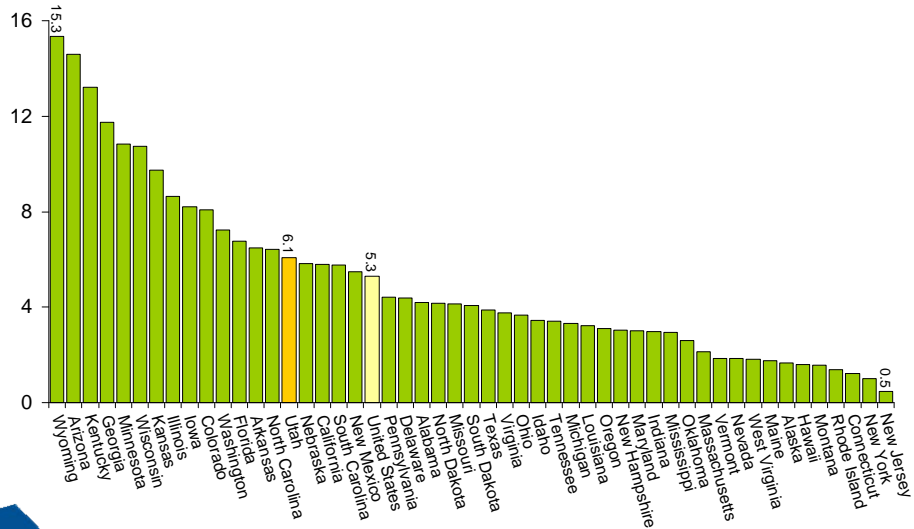
Source: NCES, IPEDS Completions Survey 2005-06; U.S. Census Bureau, 2006 ACS

Associate Degrees Awarded at All Colleges per 1,000 Adults Age 18-44 with No College Degree, 2006



Source: NCES, IPEDS Completions Survey 2005-06; U.S. Census Bureau, 2006 ACS

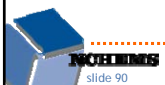
Certificates & Diplomas Awarded at All Colleges per 1,000 Adults Age 18-44 with No College Degree, 2006



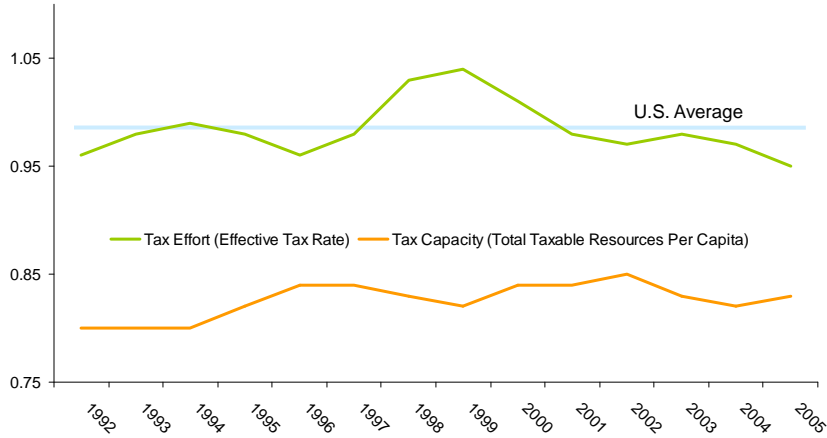
Source: NCES, IPEDS Completions Survey 2005-06; U.S. Census Bureau, 2006 ACS



THE FINANCIAL ENVIRONMENT FOR HIGHER EDUCATION IN UTAH

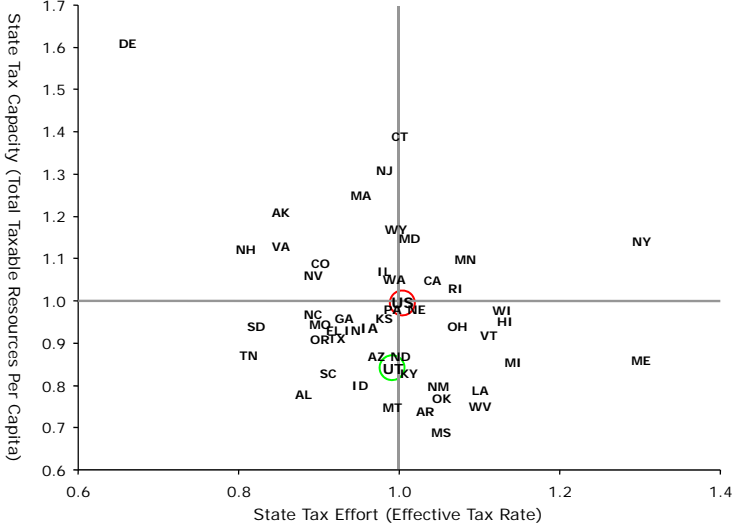


State Tax Capacity & Effort Utah Indexed to U.S. Average



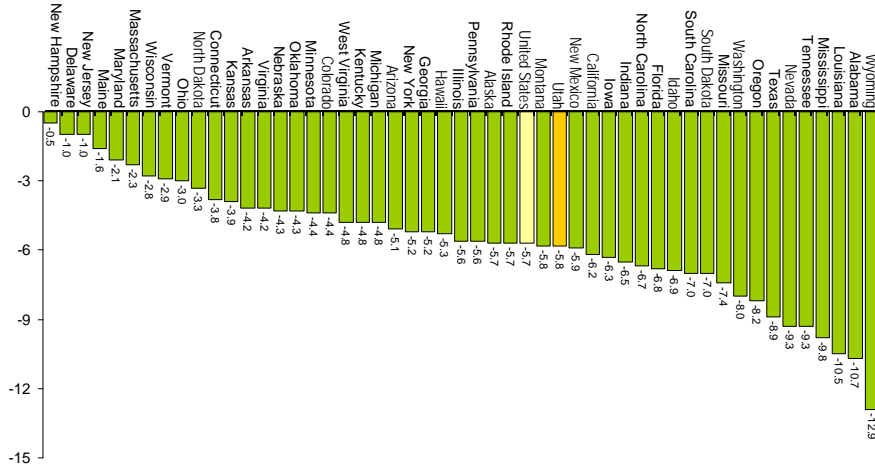
Source: State Higher Education Executive Officers (SHEEO)

State Tax Capacity & Effort Utah Indexed to U.S. Average



Source: State Higher Education Executive Officers (SHEEO)

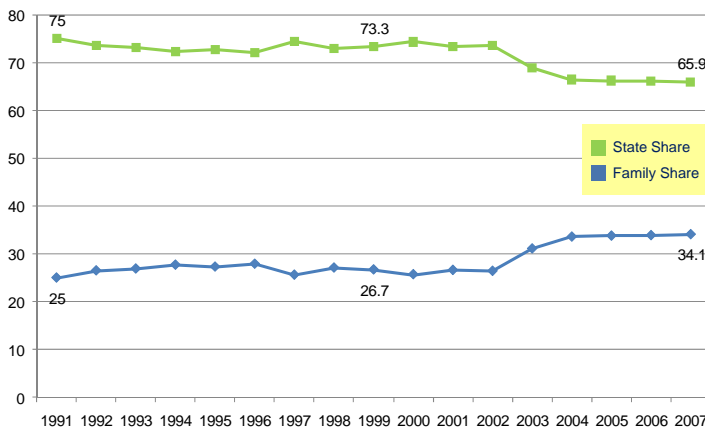
Projected State and Local Budget Surplus (Gap) as a Percent of Revenues, 2013



Source: NCHEMS; Don Boyd (Rockefeller Institute of Government), 2005



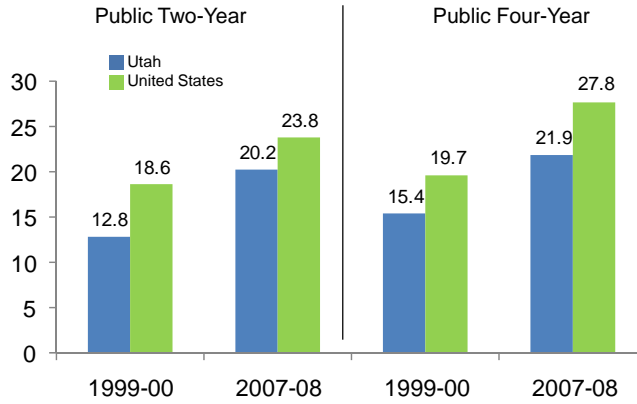
State & Family Share of Funding for Public Higher Education, 1991 – 2007, Utah



Source: NCPPHE, Measuring Up: The State-by-State Report Card for Higher Education

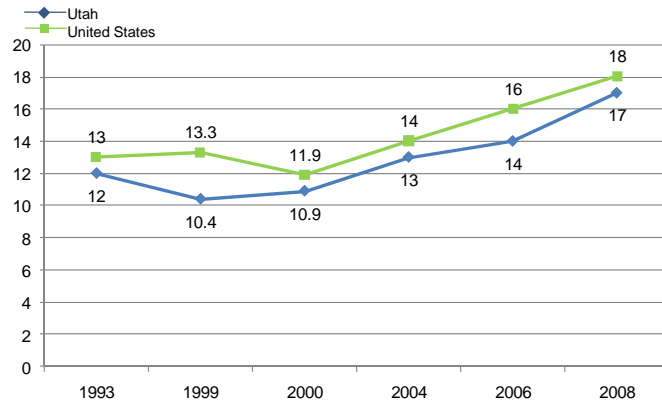


Percentage of Income Needed to Pay for College at Public Two- & Four-Year Institutions, 2000-2008



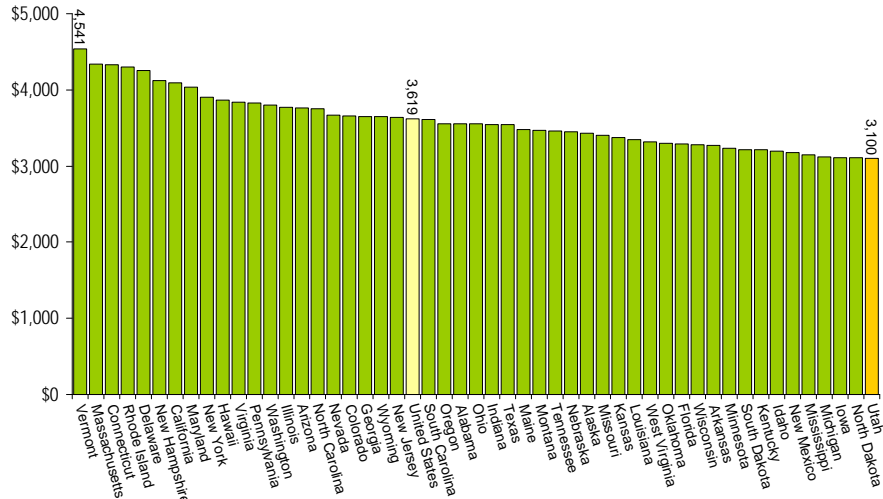
Source: NCPPE, Measuring Up:
The State-by-State Report Card for Higher Education

Share of Income that the Poorest Families Need to Pay for Tuition at the Lowest Priced Colleges



Source: NCPPE, Measuring Up:
The State-by-State Report Card for Higher Education

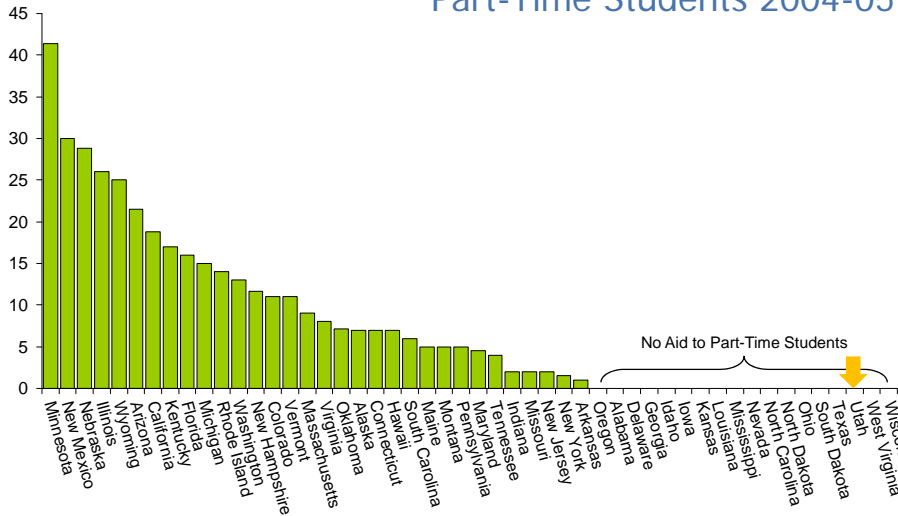
Average Loan Amount Students Borrow Each Year, 2004



Source: NCPPE, Measuring Up: The State-by-State Report Card for Higher Education



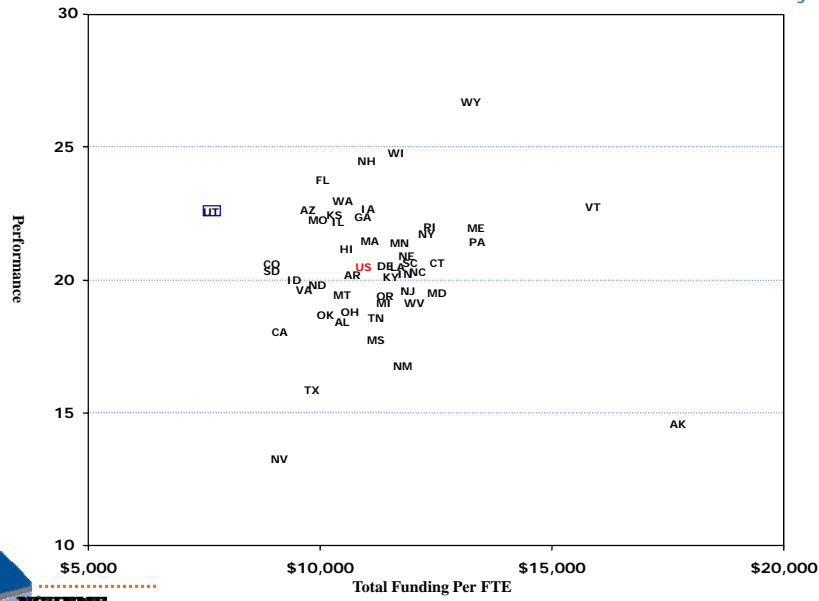
Proportion of Need-Based Aid Distributed to Part-Time Students 2004-05



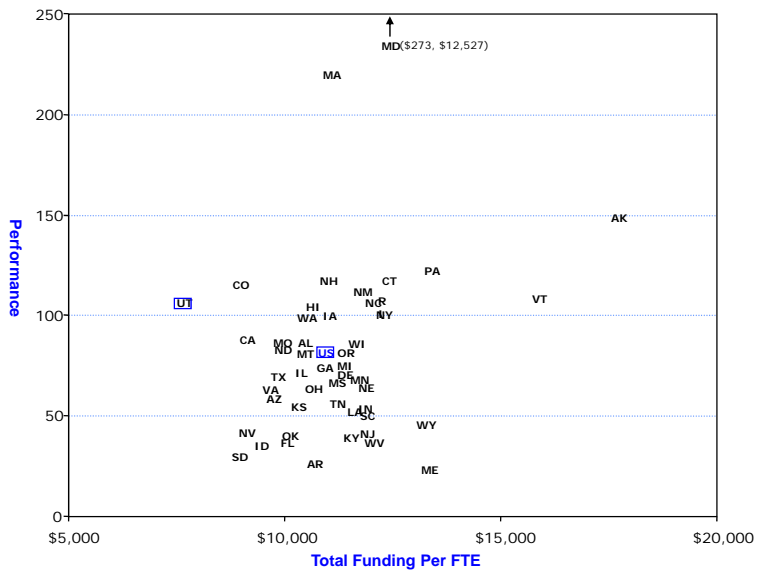
Source: NCHEMS Student Financial Aid Survey



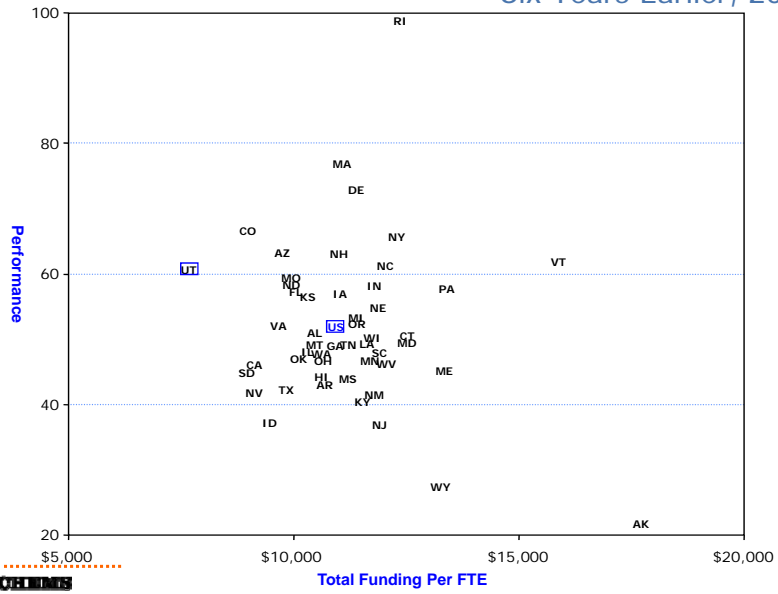
Undergraduate Credentials Awarded per 100 FTE Undergraduates, 2002-03 State Systems



Federal and Industry R&D Per Capita, 2002



Bachelor's Degrees as a Percent of High School Graduates Six Years Earlier, 2003



January 7, 2009

MEMORANDUM

TO: State Board of Regents
FROM: William A. Sederburg
SUBJECT: Report of the Commissioner

Following the presentation by Dr. Dennis Jones and the group discussion, Commissioner Sederburg will discuss the current financial challenges, present an update on institutional and System actions in response to the recommended budget cuts, and provide opportunity for presidents to comment about their institutions.

The Commissioner will then discuss strategies for the 2009 Legislative General Session.

William A. Sederburg, Commissioner

WAS:jc

January 7, 2009

MEMORANDUM

TO: State Board of Regents
FROM: William A. Sederburg
SUBJECT: University of Utah–Master of Science in Information Systems–Action Item

Issue

The University of Utah requests approval to offer an M.S. degree in Information Systems (MSIS) effective Spring Semester 2009. The proposed degree was approved by the institutional Board of Trustees on December 8, 2008. The proposed program has been reviewed and approved to move forward by the Regent's Program Review Committee.

Background

The proposed degree is designed to prepare students for the pursuit of a career or for more advanced study in information systems with a specialized focus on data driven strategies and information security. Information systems (IS) courses integrate learning of information technology and management by providing opportunities for applying and practicing information, operations, systems and management knowledge in real world oriented contexts. The undergraduate information systems major is focused on IS fundamentals including: problem solving using computer programs, data management using databases, security of information systems, methods for analyzing and converting user requirements for information systems into implementation, as well as information system implementation for web applications.

This degree will also allow students to gain knowledge in advanced subjects including data mining, advanced data management, IT in business, data strategies and technology, web strategies and technology, as well as advanced IT security topics. No other master programs in the School of Business or non-business departments can offer the same extent of concentration in IS knowledge for management applications as MS IS.

The proposed degree will allow students to take more comprehensive and focused IS courses than other existing undergraduate or graduate programs at the University of Utah and other universities within the Utah System of Higher Education. The program seeks students with diverse backgrounds. Hence, applicants will not need to have prior course work in IS or business at the time of application or admission. Once admitted, students without prior IS or business course work will need to take additional courses to satisfy the IS pre-requisite requirement or the business requirement prior to graduation.

Policy Issues

Other Utah System of Higher Education institutions have reviewed this proposal, have given input, and are supportive of the University of Utah offering this degree.

Recommendation

The Commissioner recommends that the Regents approve the University of Utah request to offer a Master of Science in Information Systems, effective Fall Semester, 2009.

William A. Sederburg, Commissioner

WAS/GW
Attachment

Academic, Career and Technical Education and Student Success Committee
Action Item

Master of Science in Information Systems

University of Utah

Prepared for
William A. Sederburg
By
Gary Wixom

January 7, 2009

Section I: The Request

University of Utah requests approval to offer an M.S. degree in Information Systems (MSIS) effective Spring 2009. This program has been approved by the institutional Board of Trustees on December 8, 2008.

Section II: Program Description

Complete Program Description

Enterprises in the private and public sectors need information systems (IS) executives, analysts and specialists with business and technology knowledge to align information technology with business strategies. Information systems (IS) courses are designed to offer courses that integrate technology into business processes or integrate management or business logic into technologies. There are growing needs for IS professionals to manage and secure data and systems that create business value. To better prepare students for challenges arising from these needs, the proposed MS IS program will allow students to take more comprehensive and focused IS courses than other existing undergraduate or graduate programs at the University of Utah and other universities within the Utah System of Higher Education. The program seeks students with diverse backgrounds. Hence, applicants will not need to have prior IS or business degrees or course work at the time of application or admission. Once admitted, students without prior IS or business course work will need to take additional courses to satisfy the IS pre-requisite requirement or the business requirement prior to graduation.

The following highlights the requirements for completing an MS IS degree:

- 30 credit hours of core, track and elective courses for students who meet the MS IS degree pre-requisites or equivalent at the time of admission. Students without prior course work on business subjects will take 6-credit hours of business courses, while students without prior course work on IS subjects will take 6-credit hours of IS pre-requisites prior to graduation.
- 15 required core credit hours including a 3-credit master project that integrates IS and business knowledge to complete a real world project.
- 6 required track credit hours in either the data or security track.
- Students are not limited to choosing one track only.
- Students need to take 9-credit hours of breadth elective courses from other non-core IS courses that are not chosen as track courses. With permissions from the MS IS curriculum committee, students can take courses in other departments or schools to expand their business, management, computing, statistics or other specialized knowledge.

The following figure shows the courses in the MS IS curriculum by category. Appendix A provides brief descriptions of these courses. All of the courses in the MS IS curriculum are or will be on 2008-2010 class schedules. Hence, no new courses will need to be added in order to offer the MS IS degree. The MS IS curriculum committee will review and, whenever necessary, revise the MS IS degree requirements every two years.

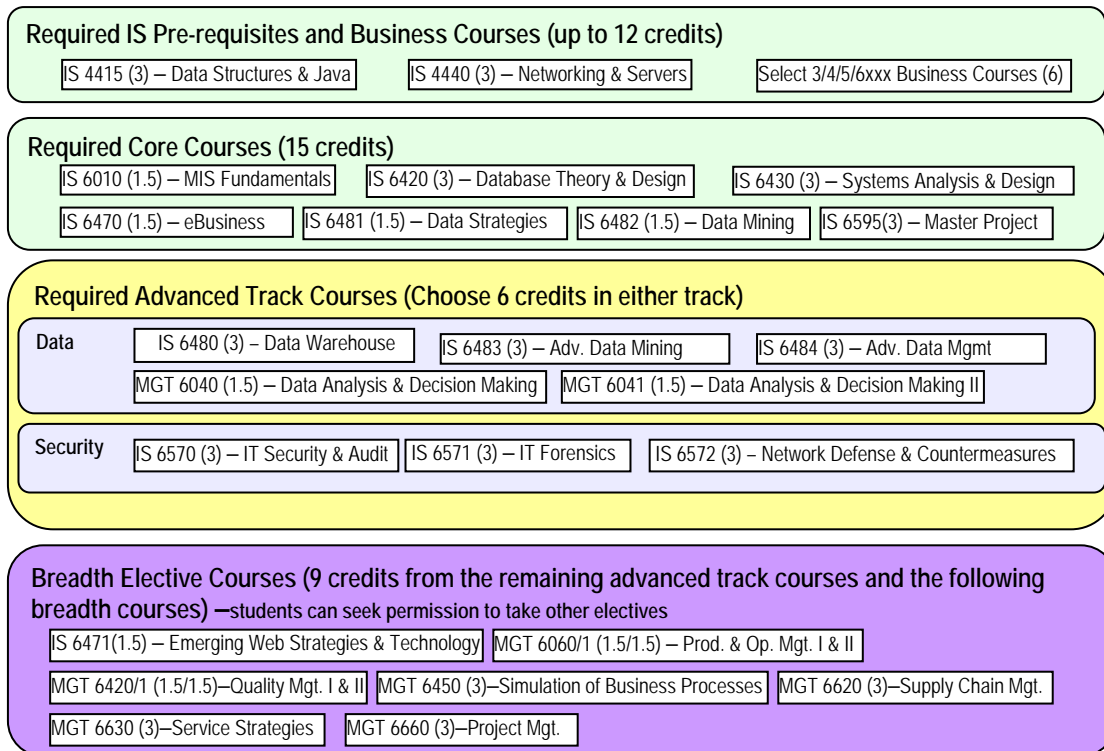


Figure 1 MS IS Curriculum

Business Requirement - At the time of admission, MS IS students who have not had prior course work in business subjects will be required to take 6-credits of business courses. Appendix A provides a sample of DESB courses that MS IS students can take to fulfill this requirement. Upon approvals by the MS IS committee, students may use other business courses not listed in Appendix A to fulfill the Business Pre-requisite requirement. Students can take courses for this requirement while taking the MS IS core, track or breadth elective courses.

IS Pre-requisite Requirement – At the time of admission, MS IS students who haven't had prior course work on IS subjects will be required to take the following two IS courses that also are pre-requisites to some of the MS IS core, track or elective breadth courses. Appendix A provides brief descriptions of these courses.

Course Number	Course Title	Credit Hours
IS 4415	Data Structures and Java	3
IS 4440	Networking and Servers	3

Required Core Courses – Each student is required to take 15 credits of required core courses in total for the MS IS degree requirement. The following table lists the required core courses for students admitted for 2009-10 if the program is approved.

Course Number	Course Title	Credit Hours
IS 6010	MIS Fundamentals	1.5
IS 6420	Database Theory and Design	3
IS 6430	Systems Analysis and Design	3
IS 6470	eBusiness	1.5
IS 6481	Data Driven Strategies and Products	1.5
IS 6482	Data Mining	1.5
IS 6595	Master Project	3

Track Courses – Each student must take 6 credits at the minimum for the track of his or her choice. The following table includes track courses in the data and security tracks.

Course Number	Course Track/Title	Credit Hours
	Data Strategies Track	
IS 6480	Data Warehouse	3
IS 6483	Advanced Data Mining	3
IS 6484	Advanced Data Management	3
MGT 6040	Data Analysis and Decision Making I	1.5
MGT 6041	Data Analysis and Decision Making II	1.5
	Information Security Track	
IS 6570	IT Security & Audit	3
IS 6571	IT Forensics	3
IS 6572	Network Defense and Countermeasures	3

Breadth Elective Courses - Each student must take at least 9 credits of breadth elective IS courses from the following list and the track courses not selected by the student for the track requirement.

Course Number	Course Title	Credit Hours
IS 6471	Emerging Web Strategies and Technology	3
MGT 6060/1	Product and Operations Management I & II	1.5/1.5
MGT 6420/1	Quality Management I & II	1.5/1.5
MGT 6450	Simulation of Business Processes	3
MGT 6620	Supply Chain Management	3
MGT 6630	Service Strategies	3
MGT 6660	Project Management	3

Students can also fulfill this requirement with courses offered by the DESB, the School of Computing or other colleges within the University of Utah with permission from the MS IS committee and the course instructors. Appendix A shows a list of other DESB courses that the students and advisors can consider to complement the students' interests in applying IS to the Accounting, Finance, Operations Management or Marketing field.

New Preps - The following table shows the four new preps of MS IS courses in 2009-2010.

Course Number	Course Title	Hours	Instructor
IS 6483	Advanced Data Mining	3	Dr. Olivia Sheng
IS 6484	Advanced Data Management	3	Dr. Olivia Sheng
IS 6571	IT Forensics	3	Dr. Randy Boyle

Purpose of Degree

The purpose of the degree is to prepare students for their pursuit of careers or study that is more advanced in information systems with specialized foci on data driven strategies and information security. Enterprises need to create, manage and secure information systems that drive business processes and strategies.

As will be elaborated in the Labor Market Demand section, the demand for information systems workforce and executives with both business and information systems knowledge has been growing rapidly in the State of Utah and the rest of the nation. Information systems courses integrate learning of information technology and management by providing opportunities for applying and practicing information, operations, systems and management knowledge in real world oriented contexts. The undergraduate information systems major is focused on IS fundamentals including: problem solving using computer programs, data

management using databases, security of information systems, methods for analyzing and converting user requirements for information systems into implementation, as well as information system implementation for Web applications. The proposed MS IS will also allow students to gain knowledge in advanced subjects including data mining, advanced data management, IT in business, data strategies and technology, web strategies and technology, as well as advanced IT security topics. No other master programs in the School of Business or non-business departments can offer the same extent of concentration in IS knowledge for management applications as MS IS.

The proposed MS IS program is expected to generate the following outcomes:

- Graduates from the MS IS program will have the knowledge and skills required to fill the market needs for information and systems management, data analysis, and information security for employers within Utah and across the nation.
- Graduates from the MS IS program will help with economic development in Utah and the rest of the nation through the application of IS knowledge and skills at work.

Institutional Readiness

On July 1, 2008, the David Eccles School of Business had five regular, tenure-track as well as two academically qualified and one professionally qualified fulltime non-tenure-track IS faculty. Current IS faculty members reside in the School of Accounting and Information Systems. The faculty teach BS and Ph.D. programs in IS as well as additional undergraduate and master level courses in the business core, business minor, and MBA programs. Two of the tenure-track IS faculty members have received tenure. One adjunct part-time lecturer is scheduled to offer 6-credit hours of IS courses starting in 2009. Several graduate teaching assistants (GTAs) cover the multiple sections of a lower division IS course.

Five tenure-track and one non-tenure-track faculty members in Operations Management (OM) reside in the Management Department also offer elective courses in data analysis, simulation modeling, project management, supply chain management, service strategies and operations management that are synergistic to IS courses. These courses offer management principles, tools or contexts for applying information systems in business processes. The strong synergies between IS and OM courses are evident. MS IS students are highly encouraged to take these OM courses for their track and elective breadth requirements.

All of the courses included in the MS IS curriculum have been scheduled as electives for MBA and other master or Ph.D. students at the University of Utah to take for 2008-2010. Hence, no additional faculty resources are required to offer MS IS. We project that the tuition-to-program revenues will support the hiring of faculty to meet additional faculty needs, if any, of MS IS after 2009-2010.

With support from the Director of School of Accounting and Information Systems, the Chair of the Management Department, and the Dean of the David Eccles School of Business, IS and OM faculty have submitted a proposal in parallel to establish a new department, named Operations and Information Systems, to house the IS and OM faculty and the proposed MS IS program. The new department will have administrative staff to provide support for the MS IS program as part of the departmental budget. The Masters Program office in the David Eccles School of Business will provide a full-range of master program services.

Faculty

The matrix below lists the faculty members who are academically qualified to teach the IS pre-requisites, core, track, and synergistic elective courses for the MS IS program if approved. Some of the faculty have already taught or are scheduled to teach these courses as the courses are already a part of the MBA elective courses or the undergraduate IS major courses. The faculty members most prepared to teach a course are marked with red squares. . At least two faculty members are qualified or most prepared to teach each of the IS courses. This level of preparedness is adequate throughout the first five years of the MS IS program. Ten out of the 16 faculty members in the matrix are regular full-time, tenure-track. In 2008-2010, all of the MS IS core courses will be taught by regular, tenure-track faculty. Four out of 16 faculty members are non-tenured contract faculty. Two of them are academically qualified. The remaining two faculty members are part-time adjunct faculty members. One of them has a Ph.D. One additional tenure-track IS and two additional tenure-track OM faculty positions are opened to be filled by fall 2009. The new IS and OM faculty hires are expected to cover teaching of various courses in the MS IS curriculum. The additional faculty resource needs depend on the growth of MS IS and BS IS programs as well as class enrollments past 2009-2010. The University of Utah will utilize the increased tuition-to-program revenue for additional hires if necessary.

Faculty members are provided research accounts which can be used to subscribe to academic and professional publications and to attend conferences or meetings in IS research and education. The University is also organizing a Board of Advisors for faculty and students. IS faculty are encouraged to seek opportunities to collaborate with the advisors on real world projects that also serve to help update faculty knowledge of real world practices.

Course			RA	RB	DG	JH	PH	DM	TM	GP	JP	VR	GS	JS	OS	ST	WT	DW
IS	4415	Data Structures and Java	☐					☐		☐		☐			☐			
IS	4440	Networking & Servers	☐	☐		☐		☐				☐						
IS	6010	MIS Fundamentals	☐				☐			☐		☐			☐			
IS	6420	Database Theory & Design	☐			☐	☐	☐		☐		☐			☐			
IS	6430	Sys Analysis & Design	☐			☐	☐	☐		☐	☐	☐			☐			
IS	6470	E-Business	☐				☐			☐		☐			☐			
IS	6471	Web Strategies & Technology	☐				☐	☐		☐		☐			☐			
IS	6480	Business Intelligence						☐							☐			
IS	6481	Data Strategies & Products					☐								☐			
IS	6482	Data Mining						☐		☐					☐			
IS	6483	Advanced Data Mining						☐		☐					☐			
IS	6484	Advanced Data Mgmt					☐								☐			
IS	6540	ERP					☐				☐							
IS	6570	IT Security & Audit		☐	☐	☐												
IS	6571	IT Forensics		☐	☐	☐												
IS	6572	Net Defense & Countermeasures		☐		☐												
IS	6595	Master Project	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Mgmt	6010/1	Prod Mgmt & Ops I & II							☐					☐	☐	☐	☐	☐
Mgmt	6040/1	Data Analysis & Decision Making I & II															☐	☐
Mgmt	6420/1	Quality Mgmt I & II															☐	☐
Mgmt	6450	Simulations of Biz Processes							☐				☐	☐			☐	
Mgmt	6620	Supply Chain Mgmt											☐	☐				
Mgmt	6630	Service Strategies											☐	☐				
Mgmt	6660	Project Mgmt				☐					☐						☐	

(RA: Rohit Aggarwal, RB: Randy Boyle, DG: David Glod, JH: Jeff Hassett, PH: Paul Hu, DM: Dan McDonald, TM: Tariq Maghul, GP: Gautam Pant, JP: Joseph Pettit, GS: Glen Schmidt, GS: Jeff Stratman, OS: Olivia Sheng, ST: Sriram Thirumalai, WT: Weiyou Tsai, DW: Don Wardell)

Staff

The home department of the MS IS program will have an administrative assistant and possibly a part-time executive secretary for clerical assistance including course updates, scheduling, communication, and event coordination for the program. Since support can be provided by reallocating the responsibilities of current staff members, no additional staff will be required. Faculty members will be assigned Ph.D. and master students to serve as our TAs for teaching and laboratory assistance. Faculty in the IS and OM areas currently work with PhD and masters students, so no increases in funding are anticipated to provide for graduate student support.

The development and operation of an MS program require services on multiple fronts including recruiting, application and admission processing, orientation, advising, course signups and drops, as well as internship/placement and alumni support services. The DESB Master Programs Office has agreed to provide the following services

- Distribute and present marketing and application information about the MS IS program to prospective applicants at recruiting visits or fairs. Whenever possible, IS faculty will also organize or participate in recruiting visits and fairs the Master Programs Office organizes.
- In partnership with the Graduate School and the MS IS faculty coordinators, receive, file and coordinate applications and admission packages
- Support MS IS students' orientation and job seeking activities
- Provide MS IS students with internship and placement information
- Handle signups and drops of graduate IS courses

IS faculty members who serve as the MS IS Program Director and MS IS Track Coordinators will provide curricular and career advising.

Library and Information Resources

Because the courses in the MS IS program have already been offered or planned, library resources are already in place. Those resources (hard copy and online journals, books, interlibrary loan services, etc.) are able to meet both learning and teaching needs of the new program.

The information resources for MS IS courses and pre-requisites have already been in place and utilized by the courses. In particular, IS classes continue to require database, data warehouse, data mining and security software packages and computer classrooms where these packages are pre-installed and configured on workstations such that the students can use them in classes for hands-on learning. Scheduling IS 4440 (pre-requisite), IS 6420, 6460, 6480, 6481, 6482, and 6483 in such classrooms will be essential to the success of these courses. IS students also can benefit from conducting their exercises in open labs in DESB so that they can expect consistent computing environments with the packages needed for their class work. In addition, a significant number of server machines are used for students to learn about the concepts behind and the setup and use of networked servers and business intelligence software.

Admission Requirements

An applicant needs to have 3.0 or higher GPA from the last higher-education degree program completed and an adequate GRE or GMAT test score to receive consideration for admission. International applicants who haven't completed a degree program in the States need to provide TOEFL scores for consideration for admission. Working experiences or prior IS or business degrees are not required. Applicants also need to submit a goal statement and three letters of recommendations to complete their application packages. The

MS IS admission committee can petition for applicants who don't meet the minimum GPA requirement of the Graduate School.

Student Advisement

Dr. Randy Boyle will receive appropriate support for his time allocation and commitment to serve as the MS IS Director to provide curricular and career advising. Dr. Randy Boyle will also serve as track coordinator for the Security Track, while Dr. Olivia Sheng will assume the role of Data Track coordinator. The track coordinators will provide track specific study and career advising. The MS IS admission committee will be responsible for reviewing applications and selecting applicants for admission.

Justification for Graduation Standards and Number of Credits

To receive the MS IS degree, a student must:

- Complete the required 30 credits of course work according to the MS IS curriculum of choice
- Complete up to 12 credits of pre-requisite courses required of the student at the time of student's admission
- Receive 2.75 GPA each year in the program
- Receive a B or higher grade from the Master Project advisor and committee members

External Review and Accreditation

The IS faculty have interacted with industry veterans in Google, IBM, Omniture, Overstock, Oracle, SAP, Sharp Analytics and Yahoo! as well as IS faculty in other similar programs about the need and curriculum design for the new MS IS program. Faculty will officially invite executives from these and other companies as well as IS faculty from other universities to serve on the Board of advisors.

There are no nationwide accreditation standards for MS IS programs. As part of the David Eccles School of Business (DESB), the MS IS courses will be part of a School review by the Association to Advance Collegiate Schools of Business (AACSB). The next AACSB review date for DESB is in 2009. The MS IS courses are well covered by regular, tenure-track or academically qualified faculty members. This review is not likely to impact the program.

Projected Enrollment

Year	Student Headcount	# of Faculty	Student-to-Faculty Ratio	Accreditation Req'd Ratio
1	10	14	1.0 : 1.4	NA
2	20	16	1.0 : 0.8	NA
3	30	18	1.0 : 0.6	NA
4	40	19	2.1 : 1.0	NA
5	50	20	2.5 : 1.0	NA

Expansion of Existing Program

The MS IS program is not an extension or expansion of an existing program.

Section III: Need

Program Need

Enterprises in the private and public sectors need information systems (IS) executives, analysts and specialists with business and technology knowledge to align information technology with business strategies. As the Labor Market Demand section will elaborate, the demand for information systems

workforce and executives with both business and information systems knowledge has been growing rapidly in the State of Utah and the rest of the nation. Information systems courses integrate learning of information technology and management by providing opportunities for applying and practicing information, operations, systems and management knowledge in real world oriented contexts. The undergraduate curriculum of information systems is focused on the information systems fundamentals on problem solving using computer programs, data management using databases, security of information systems, methods for analyzing and converting from user requirements for information systems into implementation as well as information system implementation for web applications. More comprehensive and focused IS courses than those currently available at the undergraduate and graduate levels at the University of Utah and other universities within the Utah System of Higher Education would better prepare students for challenges arise from these needs.

The proposed MS IS will allow students who finished undergraduate studies in IS or non-IS fields to enhance their applications and practices of IS and business fundamentals, and gain knowledge in advanced subjects including data mining, IT in business, data strategies and technology, web strategies and technology, and advanced IT security topics. Similar MS IS programs have placed graduates across governments, industries, and academia since 1970s. The growing demand for such graduates has led to new programs recently established at other reputable schools such as UC Irvine and North Carolina State. University of Maryland and NYU also are considering to re-instate their MS IS programs. The local community has echoed the same growing demand. The proposal is a necessary move to stay competitive with the other IS programs in the nation and to meet the market and student needs.

The following sections provide evidence that highlight several reasons for providing a new MS IS program at the University of Utah.

Labor Market Demand

The IT job market is growing fast in Utah and elsewhere in the United States. IT is one of the fast-growing employment areas in the State of Utah, with high salary jobs awaiting competent IT managers, business analysts, software developments, and systems administrators. The Bureau of Labor Statistics of the U.S. Department of Labor has published similar encouraging forecasts.

According to market demand analysis, the MS-IS students will be sought by technology vendors (e.g., systems development, business applications/process analysis and design, technical marketers, systems integration and ERP, and technology-enabled business solutions), In-house IT shops (e.g., data management, application development, business process analysis/design, systems integration, business intelligence using data warehouse and mining, systems integration and ERP, systems auditing, and network management and security), and consulting firms (e.g., business solutions, systems integrations, ERP, business intelligence, Web services, systems development, and systems auditing).

Local and multinational companies including Google, Omniture, Oracle, Overstock, Sharp Analytics, Yahoo! and Wasatch Advisors have been interacting with IS faculty members about their recruiting needs, which align with our MS IS curriculum. One common and increasingly important requirement that these and other companies often find lacking in otherwise qualified applicants is the ability to secure data assets and to extract from them actionable intelligence for enhancing their operations, services, products, and strategies. This requires effective database, data warehousing, business intelligence, and programming skills. Students can develop such IS capabilities through a focused graduate-level program that goes above and beyond a BS in IS curriculum.

As businesses continue to generate ever greater amounts of data and security risks as well as counter measures continue to increase, the demand for MS-IS graduates is expected to remain high. MS-IS programs have been offered by top, regional and local MIS programs and business schools including University of Arizona, Arizona State University, University of Florida, SUNY at Buffalo, Ohio State University, Utah State University, and BYU for more than three decades. The graduates from those programs are well placed with starting salaries averaging in the 50K range according to some programs' publicly available information. This is one more supporting evidence of a stable market for MS-IS graduates.

State of Utah

Occupational Employment Statistics for the State of Utah

Occupation (SOC code)	Employment(1)	Hourly mean wage	Annual mean wage(2)	Annual median wage(2)	Annual 90th percentile wage(2)
Computer and Mathematical Occupations(150000)	30,680	\$29.42	\$61,180	\$58,130	\$96,160
Computer and Information Scientists, Research(151011)	130	37.01	76,990	74,990	102,770
Computer Programmers(151021)	6,290	32.80	68,220	61,670	101,000
Computer Software Engineers, Applications(151031)	3,250	33.06	68,770	67,240	103,330
Computer Software Engineers, Systems Software(151032)	5,000	36.10	75,090	75,080	105,250
Computer Support Specialists(151041)	5,470	17.97	37,370	34,890	57,620
Computer Systems Analysts(151051)	2,880	30.92	64,320	62,850	93,140
Database Administrators(151061)	830	31.35	65,210	63,370	99,420
Network and Computer Systems Administrators(151071)	2,000	28.72	59,730	56,460	89,460
Network Systems and Data Communications Analysts(151081)	1,930	28.63	59,540	53,960	96,810
Computer Specialists, All Other(151099)	2,280	26.35	54,810	57,480	85,070

Footnotes:

(1) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(2) Annual wages have been calculated by multiplying the hourly mean wage by 2,080 hours; where an hourly mean wage is not published, the annual wage has been directly calculated from the reported survey data.

SOC code: Standard Occupational Classification code – see <http://www.bls.gov/soc/home.htm>. Data extracted on March 29, 2008; area: Utah; period: May 2006. Reference: Bureau of Labor Statistics of the U.S. Department of Labor Statistics for Utah, http://www.bls.gov/oes/current/oes_ut.htm#b15-0000. Typical job descriptions are available for review in the Appendix.

Student Demand

Student demand is a key factor in the success of a new program. The IS market demand indicators show a strong growth rate for the market which should fuel long-term growth of the program as more job opportunities are created and recruiters witness the demand for these students.

Although the MS IS program will follow the national trend to attract out of state and international students, immediate and local student demand is what we have attempted to survey. The University of Utah has historically had a large portion of commuter students and tends to populate its undergraduate programs

with local students. Gauging the interest of our current student population through a survey seemed most appropriate.

Survey Information

Participant Search

Students were sent an invitation for an online survey. The students receiving the survey were students in IS 2010 and IS 4410. These courses were selected because they contain a broad cross-section of business students both from major and class perspectives. These two classes are required for all business majors and IS 2010 is taken during the freshman/sophomore year and IS 4410 is taken during the sophomore/junior years. Approximately 800 students are currently enrolled in these two courses. We expected at least a 30 percent response rate or approximately 250 student responses.

Results/Conclusions

There were 494 responses to the survey. The high response rate, within a few days of releasing the survey, shows a strong interest from our current students. The data also points to a number of important observations.

- There is a strong interest of current students to take advantage of an MS-IS program. Having 40 students stating that they would take advantage of this program immediately and another 91 students state they would strongly consider it points to a class that could easily start out to be at least half as large as some of our DESB's current graduate programs.
- Information Systems is an area of great interest to our students. Only one-third of those not interested in the program stated (less than 17 percent of all surveyed) stated they had no interest in this field of study. Many students are realizing the importance of this field and also the industry is continuing to grow and will become one of the fastest growing areas over the next decade (see Market Demand).
- We have only surveyed the current DESB students. Other institutions are seeing growth in IS undergraduates and we will also be able to capitalize on this market as our program grows and gains reputation. We plan to conduct a similar survey to collect more degree/program specific information and will include students from our feeder institutions as well as other institutions that have historically sent students to other graduate programs at DESB.

Similar Programs

To support the creation of a Master of Science in Information Systems (MS-IS) graduate degree it is important to compare the proposed program with existing comparable programs. We have gathered data on 17 similar graduate programs in information systems offered at other schools. Our list includes programs in schools that were identified as top graduate schools in information systems¹, peer schools, programs in the region, as well as some large or visible programs across the nation. The following table lists the program names and websites from which data was gathered.

¹ US News & World Report Best Graduate Schools 2007: Business – Information Systems

	University	Program Name	Link
1	Carnegie Mellon U. (Tepper)	Master of Information Systems Management	http://ism.cmu.edu/Full-Time/index.asp
2	U. of Arizona (Eller)	Master's degree in Management Information Systems	http://mis.eller.arizona.edu/content/view/45/117/
3	Georgia State U.	Master of Science, Information Systems	http://www2.cis.gsu.edu/cis/program/mscis.asp
4	Indiana U.–Bloomington (Kelley)	Master of Science in Information Systems	http://www.kelley.iu.edu/ODT/Masters/page11075.html
5	Arizona State U.–Main Campus (Carey)	Master of Science in Information Management (MSIM)	http://wpcarey.asu.edu/is/msim/index.cfm
6	U. of Illinois–Urbana-Champaign	MS-Tech	http://www.ms-tech.uiuc.edu/program/index.html
7	U. of Georgia (Terry)	Master of Internet Technology	http://ebiz.terry.uga.edu/mit/
8	Bentley College (McCallum)	Master of Science in Information Technology	http://www.bentley.edu/cis/Programs/MSIT/MSIT.cfm
9	U. of Rochester (Simon)	MS Business - Information Systems Management	http://www.simon.rochester.edu/ms/concentration.aspx?ISM
10	U. of Texas - Dallas	Master of Science in Information Technology & Management	http://som.utdallas.edu/graduate/graduate_ms_itm_degree_plan.htm
11	George Washington U.	Master of Science - Information systems Technology (MIS, ISD, ISPM)	http://www.msist.gwu.edu/programs/traditional.asp
12	U. of Florida	Master of Science degree in Decision and Information Sciences	http://www.cba.ufl.edu/isom/programs/msdis/
13	U. of South Florida	Master of Science in Management Information Systems	http://www.coba.usf.edu/departments/isds/programs/master/index.html
14	SUNY-Buffalo	Master of Science in Management Information Systems	http://www.mgt.buffalo.edu/mba/msmis/
15	Utah State U.	Master of Science in MIS	http://www.huntsman.usu.edu/cob/degreesmajors/bisms.cfm
16	BYU	Masters of Information Systems	http://isis.byu.edu/Menu/Masters/Overview.cfm
17	U. of Cincinnati	Master of Science in Information Systems	http://www.business.uc.edu/msis

Table for Titles and Web Addresses of Similar Programs

The following table lists admission and program requirements collected from these 17 similar programs' web sites. This side-by-side comparison shows that several schools have the same admission and graduation requirements as those of the proposed MS IS program. It also confirms that allowing students to complete the MS IS program in 12 months when necessary is consistent with the trend. Based on comparisons of program tracks or emphasis options not shown here, our data and security focus is a niche that some of the similar programs have started to expand on but don't necessary have the same depth in these tracks as that in the proposed program.

	University	Admission	Program Hours	Project	Program Length
1	Carnegie Mellon University (Tepper)	GRE/GMAT/ 3-year work experience	45	Yes	1 year
2	University of Arizona (Eller)	GRE/GMAT	31	Yes	1 year
3	Georgia State University	GMAT	36	opt.	1 year
4	Indiana University–Bloomington (Kelley)	GRE/GMAT	30	Yes	3 semesters

	University	Admission	Program Hours	Project	Program Length
5	Arizona State University–Main Campus (Carey)	2-year work experience	30	Yes	1 year
6	University of Illinois–Urbana-Champaign	2-year work experience/GMAT	30	No	1 year
7	University of Georgia (Terry)	GRE/GMAT	32	Yes	5 semesters
8	Bentley College (McCallum)	GRE/GMAT	30	No	2 years
9	University of Rochester (Simon)	GRE/GMAT	39	No	1 year
10	University of Texas - Dallas	GMAT	36	No	2 year
11	George Washington University	GRE/GMAT	42-45	Capstone	1 -2 years
12	University of Florida	GRE/GMAT	36	opt.	1.5 years
13	University of South Florida	GRE/GMAT	33	Capstone	1 year
14	SUNY-Buffalo	GRE/GMAT	31	Yes	1 year
15	Utah State University	GMAT	33	No	2 years
16	BYU	GMAT	40	UG	2 years
17	University of Cincinnati	GRE/GMAT	72	Capstone	2 years

Capstone: capstone class required. SAD: System Analysis and Design; opt: optional; UG: undergraduate course.

Collaboration with and Impact on Other USHE Institutions

The IS faculty has had close collaboration with IS programs and faculty at other USHE institutions including Utah Valley State College, Salt Lake Community College and Utah State University. Utah State University has a similar MS IS program, however, without the same track foci. Their MS IS program is a two-year study. The shorter study length, the different study foci and the metro location will be the reasons why the proposed MS IS program at the University of Utah will target at a different population of prospective students than that of Utah State University's MS IS program. The University will collaborate closely with other USHE institutions to advise their students on benefits of an MS IS study and how to prepare and apply for the MS IS program. This will be done via open houses, communication material and one-on-one Q/A by phone or emails. Students at other USHE institutions will benefit from the opportunities the MS IS program offers.

Benefits

Many states house one or more MS IS program. The benefit of establishing an MS IS program in Utah's flagship university is evidently positive on expanding students' study and career options and on economic development.

Consistency with Institutional Mission

Configuration of the Utah System of Higher Education and Institutional Missions and Roles (R312) states that the institution's mission is to discover, create, and transmit knowledge through education and training programs at the undergraduate, graduate, and professional levels; through research and development; and through service and extension programs associated with a major teaching and research university.

Emphasis is placed on teaching, research, and service. The institution contributes to the quality of life and economic development at the local, state, and national levels.

The proposed MS IS is designed to support our institution's mission via:

- Discovery and dissemination of a synergetic combination of technical and business knowledge through real-world-oriented learning opportunities, integrated within required, core, and elective course work.
- Preparing students to meet the growing need for IS or business professionals and leaders to understand, implement, use, and manage data-driven and security strategies as well as technologies.

- Motivating and preparing students for IS Ph.D. studies
- Supporting local and state economies with high-quality data and security professionals and managers who help create value for their employers and establish solid financial foundations with above-average income jobs.

Section IV: Program and Student Assessment

Program Assessment

- Recruiting, admission and retention goals and measures
 - Goals – to recruit high-caliber applicants and retain students in quantity that meet or exceed the five-year program size projections.
 - Measures – applicant pool size and program size, # of applicants recruited per recruiting channel/event, average GRE or GMAT and GPA of applicants and of students, # of applicants, and students by most recent location and degree/institution.
- Student learning and graduation goals and measures
 - Goals – to graduate 95% of the students admitted who meet the learning goals of MS IS.
 - Measures – the learning measures include
 - The student demonstrates IT knowledge, technical skills and business understanding in the classes with 2.75 or higher GPA.
 - The student is effective in integrating business knowledge and IT concepts in a real world project by achieving a B or higher grade from the student's Master Project advisor and committee.
 - The student is effective with analytical and critical thinking as measured using assignments or projects in program course work.
 - The student is effective with teamwork and management as measured using group projects in the program study.
 - The student is effective with written and oral communication measured using assignment, case analysis, and project writing and presentation in classes.
- Placements goals and measures
 - Goals – to help MS IS graduates obtain career opportunities that leverage the knowledge they have learned in the program.
 - Measures – # of positions by title, skills used, companies and industry as well as average salaries, sign-in bonus, and stock options received in students' offers.
- Student evaluation goals and measures
 - Goals – to assure positive student and graduate perceptions of program design, study benefits and quality of cohort for improvement of the MS IS Program.
 - Measures – summaries of students' mid study, exit, and alumni interviews/surveys
- External evaluation goals and measures
 - Goals – to assume positive perceptions of students and graduates by recruiters, guest speakers, project sponsors and coordinators for MS IS students for improvement of MS IS program.
 - Measures – summaries of external surveys
- Financial goals and measures
 - Goals – to meet or exceed the budget projection
 - Measures – Student credit hours, revenues from MS IS, and scholarships and program fund raised.

Expected Standards of Performance

The MS IS students are expected to meet the performance standards in the following competencies

- IT knowledge, technical skills and business understanding
- Integrating business knowledge and IT concepts in a real world project by achieving a B or higher grade from the student's Master Project advisor and committee.
- Analytical and critical thinking as measured by assignments or projects in program course work.
- Team work and management as measured by group projects in the program study.
- The student is effective with written and oral communication required of assignments, case analysis, and project writing and presentation in classes.

The performance will be measured using peer, instructor, or project coordinator evaluation using 7-point liker scale on multiple questions related to each competency. The MS IS committee and the Board of Advisors to be formed by spring 2009 will jointly design these evaluation questions.

Section V: Finance

Financial Analysis Form					
	Year 1	Year 2	Year 3	Year 4	Year 5
Students					
Projected FTE Enrollment	7	14	21	28	35
Cost Per FTE	\$6,829	\$5,500	\$13,476	\$10,179	\$13,800
Student/Faculty Ratio	7/10	1 4/10	2 1/10	2 9/10	3 6/10
Projected Headcount	10	20	30	40	50
Projected Tuition					
Gross Tuition	\$86,037	\$180,678	\$284,567	\$379,423	\$522,893
Tuition to Program	\$63,000	\$132,300	\$208,373	\$291,722	\$382,884
5 Year Budget Projection					
	Year 1	Year 2	Year 3	Year 4	Year 5
Expense					
Salaries & Wages	\$30,000	\$50,000	\$200,000	\$200,000	\$350,000
Benefits	\$10,800	\$18,000	\$72,000	\$72,000	\$126,000
Total Personnel	\$40,800	\$68,000	\$272,000	\$272,000	\$476,000
Current Expense	\$5,000	\$6,000	\$7,000	\$8,000	\$1,000
Travel	\$2,000	\$3,000	\$4,000	\$5,000	\$6,000
Capital					
Library Expense					
Total Expense	\$47,800	\$77,000	\$283,000	\$285,000	\$483,000
Revenue					
Legislative Appropriation					
Grants & Contracts	\$10,000	\$20,000	\$40,000	\$60,000	\$80,000
Donations					
Reallocation					
Tuition to Program	\$63,000	\$132,300	\$208,373	\$291,722	\$382,884
Fees					
Total Revenue	\$73,000	\$152,300	\$248,373	\$351,722	\$462,884
Difference					
Revenue-Expense	\$25,200	\$75,300	-\$34,628	\$66,722	-\$20,116

Budget Comments

An FTE is a student taking 15 credits per semester. Cost per FTE is derived from dividing total expenses by the # of FTE students. As each faculty also covers classes in other programs, the student to faculty ratio may not be useful. The tuition and tuition to program projections are based on a 5% annual tuition increase. The tuition to program income for year 1 assumes \$300 per graduate credit. Since the courses in MS IS are already scheduled for the MBA and other graduate students in 2008-2010. The additional wages and salaries in years 1 and 2 only show additional cost for program advising and possibly adjunct faculty. In years three and five respectively, we expect the increased tuition-program size fund one additional regular, tenure-track hire in each year.

Funding Sources

The funding source is primarily from tuition-to-program. The IS faculty also expect to solicit donations from technology and major recruiting companies that can be directed to this program.

Reallocation

No internal reallocation is requested at this point.

Impact on Existing Budgets

Because the program will be self sufficient generating \$112,479 accumulative surplus, the program does not impact the existing budgets of other units.

Appendix A: Program Curriculum

All Program Courses

List all courses, including new courses, to be offered in the proposed program by prefix, number, title, and credit hours (or credit equivalences).

Course Prefix & Number	Title	Credit Hours
Core Courses		
IS 6010	MIS Fundamentals	1.5
IS 6420	Database Theory and Design	3
IS 6430	Systems Analysis and Design	3
IS 6470	eBusiness	1.5
IS 6481	Data Driven Strategies and Products	1.5
IS 6482	Data Mining	1.5
IS 6595	Master's Project	3
	Sub-Total	15
Data Strategies Track		
IS 6480	Building Business Intelligence Systems	3
IS 6483	Advanced Data Mining	3
IS 6484	Advanced Data Management	3
MGT 6040	Data Analysis and Decision Making I	1.5
MGT 6041	Data Analysis and Decision Making II	1.5
	Sub-Total	12
Information Security Track		
IS 6570	IT Security & Audit	3
IS 6571	IT Forensics	3
IS 6572	Network Defense and Countermeasures	3
	Sub-Total	9
Elective Courses		
IS 6471	Emerging Web Strategies and Technology	3
IS 6540	ERP	3
MGT 6060/1	Product and Operations Management I & II	1.5/1.5
MGT 6420/1	Quality Management I & II	1.5/1.5
MGT 6450	Simulation of Business Processes	3
MGT 6620	Supply Chain Management	3
MGT 6630	Service Strategies	3
MGT 6660	Project Management	3
	Sub-Total	24
	Total Number of Credits	60

New Courses to be Added in the Next Five Years

The following courses have been added for MBA electives in 2009-2010. The MS IS program will not need new courses in the next five years.

Course Number	Course Title	Credit Hours	Course Description
IS 6483	Advanced Data Mining	3	Theory and applications of recommendation, profiling, fraud detection, time series analysis, social network analysis and web mining algorithms
IS 6484	Advanced Data Management	3	Distributed data mgmt, web data mgmt, query, ETL and storage optimization
IS 6540	ERP	3	Technological and management issues and best practices of ERP systems
IS 6571	IT Forensics	3	Exam computer forensics and investigations

The following provide descriptions of IS courses. The remaining course descriptions are available in online catalog of the Management courses.

Course ID	Cr.	Title	Description
IS 4415	3	Data Structures & Java	This course covers the design, implementation, and analysis of basic data structures and algorithms. The data structures covered include stacks, queues, list, trees, and graphs. Algorithms for searching, sorting, and traversing the data structures will be introduced. Students are required to implement the data structures and algorithms as library components of computer programs using Java.
IS 4440	3	Networking & Servers	An introduction to the design, operation, and management of telecommunication systems including Server 2003, IIS, Linux, TCP/IP, management support for networking. This course provides instruction in data communications and computer network definitions, concepts and principles, including (but not limited to): the conversion of voice, data, video and image to digital form; topologies; protocols; standards; and fundamental concepts related to data communication networks, such as routers, gateways, cabling, etc. It prepares students to make intelligent and informed decisions about data network design/management, by analyzing the benefits, drawbacks, effects, tradeoffs, and the compromises related to various data communication technologies. You will learn how to make policy, design, and installation decisions related to planning and implementing data communication and computer network applications.
6010	3	Fundamentals of Management Information Systems	This course is to provide MBA students with (1) a comprehensive survey of important information systems and their business applications (2) a good understanding of essential issues or challenges surrounding management of information systems, and (3) a detailed analysis of prevailing information systems management practices and strategies in different organizations. This course strikes for a balance between technical issues and managerial considerations. Lectures and in-class discussions are the primary teaching methods, supplemented by case analysis, computer labs, and individual assignments.
6420	3	Database II	This course is designed to provide MBA and graduate students with (1) an overall understanding of fundamental database design theories and concepts, (2) detailed knowledge of essential techniques for designing database systems, (3) hands-on experiences in implementing (prototype) database systems using Oracle and ACCESS, (4) a firm grip of key management issues surrounding database technology, and (5) insights into emerging business applications enabled by database technology. This course emphasizes on database fundamentals that include data modeling, database design and implementation, structured query language (SQL), core DBMS functionality (such as transaction management, concurrency control and error recovery management), and advanced topics related to database technology.
6430	3	Systems Analysis and Design II	This course introduces you to the field of information system analysis, analysis tools, and the procedures for managing information system analysis projects. Topics covered include the role of the systems analyst in organization; concepts, philosophies, and trends in systems analysis and design; and tools and techniques for such analysis activities. A strong emphasis will be on case analysis and practicing the techniques for real world systems.
6470	1.5	E-Business	This course provides MBA students with an overall understanding of electronic commerce. It is designed to provide (1) an overview of essential technological infrastructure underpinning e-commerce, (2) a comparative analysis of important business activities that take place in the conventional marketplace versus in the virtual market-space, and (3) a survey of interesting e-commerce technologies, business models/practices, and strategies.
6480	3	Building Data Warehouses	This course introduces dimensional modeling, data extraction, loading and transformation (ETL) and online analytic processing (OLAP) reporting concepts and practices for building scalable data warehouse systems. Students will practice core methods and explore real world applications and issues in hands-on assignments and group projects.

Course ID	Cr.	Title	Description
6481	1.5	Data Driven Strategies and Products	This course covers the management of quality, systems, process, people, organization and investment in order to create value from data driven products. Students will analyze cases, data and explore data driven product management strategies for real world applications.
6482	1.5	Data Mining	This course introduces data mining technologies that assist in discovery of reliable, understandable and useful patterns in structured, semi-structured and unstructured data. Students will practice core data mining technologies, analyze cases, and explore real world applications and issues.
6483	3	Advanced Data Mining	This course covers advanced data mining methods, software tools and applications for text and web data mining as well as sequence and time series, social network analysis, segment and prediction analysis and modeling. Students will collect and analyze real world data using available data mining software or programming tools. Pre-req: IS 6482
6484	3	Advanced Data Management	This course covers issues, methods and applications of distributed data management, multimedia data management, web data management and optimization of query processing, ETL and storage management.
6540	3	ERP	This course covers technological and management issues related to ERP.
6570	3	IT Security & Audit	Examines management issues associated with the control and audit of information systems. Specific emphasis is on IT controls and their evaluation, computer-based auditing techniques, encryption, and security policies. Recent developments in IT, such as client-server systems and the Internet, and their impact on auditing, control, and security, are also considered. Prerequisite: IS4440 or the telecommunication equivalent.
6571	3	IT Forensics	Examines computer forensics and investigations. It looks at the problems and concerns related to computer investigations. It blends traditional investigation methods with classic systems-analysis problem-solving techniques and applies them to computing investigations. It implements common computer forensic tools in real-life scenarios.
6572	3	Network Defense & Countermeasures	Provides a solid foundation in network security fundamentals. The primary emphasis is on intrusion detection. Examines developing a security policy and then implementing that policy by performing Network Address Translation, implementing packet filtering, installing proxy servers and firewalls, and setting up Virtual Private Networks. This course assumes familiarity with the Internet and basic networking concepts such as TCP/IP, gateways, routers, and Ethernet.
6595	3	Master's Project	The student completes a complex information system development, strategic planning or research project under the supervision of a full-time IS faculty member. The student is required to generate a written report for approval of the credit by the advisor and the MS IS committee. The project is expected to allow the student to integrate knowledge from individual courses and further expose students to new topics or techniques.

Courses Recommended For Elective Breadth or Business Pre-Requisite Requirement

ACCTG 6000 Financial Accounting (3) Prerequisite: Masters status in the School of Business.

Designed to provide students with an understanding of the financial-reporting process followed by all public and many private companies. Students gain the ability to read and understand published financial statements and perform formal financial analysis.

ACCTG 6001 Managerial Accounting (1.5) Prerequisite: ACCTG 6000.

Focuses on the way managements determine the information they need for effective decision-making and how those needs are met. Includes consideration of a variety of management-planning, control, and decision-making tools. Considers the communication and behavioral aspects of their use.

FINAN 6020 Financial Management (1.5 to 3) Prerequisite: Master's status in the School of Business and either ACCTG 6001 or equivalent.

Topics include financial analysis, planning, working-capital management, financial math, valuation, and capital budgeting.

FINAN 6022 Financial Management (3) Prerequisite: MS status in Business School and either ACCTG 6001 or equivalent.

For PMBA students. Topics include financial analysis, planning, working-capital management, financial math, valuation, and capital budgeting.

FINAN 6025 Managerial Economics (1.5) Prerequisite: Master's status in the School of Business and either MATH 1100 or equivalent.

Addresses fundamental principles of economics from the managerial perspective. Topics include supply and demand in markets, analysis of production and cost, consumer theory, analysis of market structure, the banking system, and macroeconomics.

FINAN 6120 Economics (3) Prerequisite: Masters status in the School of Business.

Teaches the basic principles of microeconomics and macroeconomics and their usefulness in making business decisions. The course covers supply and demand, individual's consumption, savings, and labor behavior. In addition, the course analyzes both short-run fluctuations and long-run growth of the aggregate economy. Topics include profit maximization, utility maximization, demand, supply, uncertainty, game theory, agency theory, booms and recessions, inflation and unemployment, monetary and fiscal policy, budget and trade deficits, and interest and exchange rates.

FINAN 6121 Corporate Finance (2.8) Prerequisite: Masters status in the School of Business.

Uses modern financial theory and analytical methods as the framework for decision-making by corporate financial officers. Topics include financial mathematics, valuation of financial and real assets, capital budgeting, capital structure, cost of capital, management of working capital, issuing bonds and stocks, mergers and acquisitions, and international finance. The overall framework is maximizing shareholder value.

MGT 6040 Data Analysis and Decision Making I (1.5) Prerequisite: Master's status in the School of Business, MATH 1090, MGT 2350.

This course will develop decision making abilities with data-analysis and decision models. Applications will be in the business functional areas. Students will use computers to solve business problems. Course topics will include advanced statistical analysis, regression models, linear programming, decision analysis, and project management.

MGT 6041 Data Analysis and Decision Making II (1.5) Prerequisite: MGT 6040.

This course is a continuation of Data Analysis and Decision Making I. Course topics will include simulation, linear programming, and Bayes theorem.

MGT 6060 Production and Operations Management I (1.5) Prerequisite: Masters status in the School of Business.

Operations Management involves designing, operating, and improving the processes whereby any firm (such as a hospital) transforms raw materials (e.g., sick patients) into finished goods (e.g., cured patients). A key role of Operations is to manage the flow of work through these process steps, with the goal of closely matching supply with demand while enhancing quality and minimizing cost. Thus we develop a framework for analyzing business process flows within a firm and across firms, applying the principles not only to service industries but also to manufacturing.

MGT 6061 Production and Operations Management II (1.5) Prerequisite: Master's status in the School of Business, MGT 6060.

This course builds on MGT 6060 by looking more closely at how the management of supply chains, capacity, inventory, quality, and product design can have a positive impact on the match between supply and demand, and on profitability. The course further examines how firms in both service industries and manufacturing have used the Operations function to help create a competitive advantage, and how firms have achieved a strategic fit between the Operations function and other business disciplines.

MGT 6140 Statistics (2.8) Prerequisite: Masters status in the School of Business.

Statistics provides an overview of basic statistical concepts and methods for managers. The emphasis is on understanding the concepts and their application to the real world business data. The conceptual material focuses on the importance of statistical thinking to make sound business decisions. The statistical methods are implemented using a computer to analyze business and economic data sets, with emphasis on interpreting the output. Topics covered include descriptive statistics (how to organize data and display it graphically), probability theory, distributions (empirical, mathematical and sampling), statistical inference (hypothesis testing), and the study of relationships (regression and correlation).

MGT 6160 Operations Management (2.8) Prerequisite: Master's Status in the School of Business.

Operations management studies traditional operations management theories and methodologies as well as many new and developing models and associated technologies that are reshaping the way that firms manage procurement, production, and distribution of goods and services in an increasingly competitive international marketplace. This course develops a systems

thinking approach that is critical for successful design and strategic management of world-class manufacturing and service operations. Topics covered include integrated product/process analysis and design, materials management, supply chain management, industry structure and virtual organizations, use of information technologies in the extended enterprise, service operations management, total quality management, experience curve concepts, technology management, project management, and current developments in operations strategy. Superior management of operations can result in considerable competitive advantages.

MGT 6420 Quality Management I (1.5 to 3) Prerequisite: MGT 6050.

Introduction to the principles of quality management, with an emphasis on cross-functional problem solving. Topics include system design to control the quality of products and services, customer driven quality, leadership, employee participation and training, and strategic quality planning.

MGT 6421 Quality Management II (1.5 to 3) Prerequisite: MGT 6050.

An introduction to the tools of process control and improvement. Topics include design quality and error prevention, management by fact, statistical thinking and statistical process control. Emphasis will be given to the design and interpretation of process control charts.

MGT 6425 Six Sigma for Managers (3) Prerequisite: MGT 6040.

Six Sigma is a philosophy and set of concrete tools designed to reduce variation in all critical processes to achieve continuous and breakthrough improvements that impact the bottom line of organization and increase customer satisfaction. In this course, we will study the five phase DMAIC (Design-Measure-Analyze-Improve-Control) approach in detail with a combination of lecture, small group breakout sessions, and hands-on practice. Course topics will include a review of statistics, process improvement tools, statistical process control, measurement system evaluation, capability analysis and design of experiments. Statistical software such as Minitab will be required and used throughout the class.

MGT 6430 Regression Analysis (1.5 to 3) Prerequisite: MGT 6040.

Regression theory and applications to managerial and social-science problems. Two- and three-variable regression in summation notation, matrix algebra, general linear model, and advanced topics.

MGT 6440 Multivariate Statistics for Management (1.5 to 3)

A practical introduction to multivariate statistical methods as applied in business. Topics to include multiple regression, multivariate analysis of variance (MANOVA), principle components analysis, cluster analysis (hierarchical clustering, k-means), canonical correlation, factor analysis, discriminant analysis, and structural equations modeling -if time permits! Also a review of matrix algebra up through eigenvalues and eigenvectors. Emphasis will be given on the use of SPSS statistical software to implement statistical tools for approaching data problems in business; interpreting and analyzing the software's output.

MGT 6450 Simulation of Business Processes (1.5 to 3) Prerequisite: MGT 6040.

This class will concentrate on building simulation models of business practices, and on using the models to improve processes. Simulation software will be used to allow for modeling of complex situations in many areas of business, including production management, finance, and marketing.

MGT 6460 Stochastic Models in Management Science (1.5 to 3) Prerequisite: MGT 6040.

Chance-constrained programming and other stochastic programming models, inventory and queuing models, computer simulation of management systems, probabilistic dynamic programming, replacement models, Markov-chain models, dynamic programming in Markov chains.

MGT 6610 Practical Management Science I (1.5 to 3) Prerequisite: MGT 6040.

This course takes a practical approach to management science by using popular business software (e.g., Microsoft Excel) to solve analytical models. Management-decision problems covered in the course may include marginal analysis, linear and integer programming, goal programming, transportation models, specialized network models, inventory models, critical-path method/project management networks, queuing theory, and simulation. Where applicable, the course will build on topics at a more advanced level than models covered in required MBA courses such as MBA 6430 -- Data Analysis and Decision Making -- and MBA 6300 -- Production/Operations Management.

MGT 6611 Practical Management Science II (1.5 to 3) Prerequisite: MGT 6040.

This course continues the practical approach to management science by using popular business software (e.g., Microsoft Excel) to solve analytical models. Management-decision problems covered in the course may include marginal analysis, linear and integer programming, goal programming, transportation models, specialized network models, inventory models, critical-path method/project management networks, queuing theory, and simulation. Where applicable, the course will build on topics at a more advanced level than models covered in required MBA courses such as MBA 6430 -- Data Analysis and Decision Making -- and MBA 6300 -- Production/Operations Management. Although it is recommended to take both MGT 6710 and MGT 6711 in succession, MGT 6710 is not a prerequisite for this course.

MGT 6620 Supply Chain Management (1.5)

Production of services and goods typically involves many process steps that are spread across multiple firms or departments. In supply chain management (SCM) we examine how to improve performance by considering the actions of multiple members within this chain of activities. SCM addresses not only the flow of materials from upstream to downstream members in the supply chain, but also the flow of information and funds. Advancements in information technology allow the supply chain to achieve performance improvements previously beyond reach, and may change the optimal structure of the supply chain. Class discussion is motivated by case studies that examine successful emerging supply chain strategies.

MGT 6621 Operations Strategy (1.5)

We explore various operational strategies that can lead to competitive advantage. Within each topic, we develop a framework or theory that the firm can use to aid in decision-making, and typically also tackle a real-life problem using a case study. Possible topics include product and process innovation, strategic implications of the learning curve, strategies from diffusion of new products, rapid product and process development, capacity management, strategic supplier management, strategic quality management, and mass customization.

MGT 6630 Operations Planning and Control (1.5 to 3) Prerequisite: MGT 6060 or 6061.

Design of information and decision systems for allocating resources and scheduling activities. Development of conceptual structures for guiding the design of integrated planning and control systems. Topics include forecasting, materials resource planning, just-in-time manufacturing, and capacity management.

MGT 6660 Project Management (1.5 to 3) Prerequisite: Masters status in the School of Business.

Project management has become the way of life in many industries. Whether it is development of a new product, organizational-wide implementation of a new IT tool, or execution of a merger, project management skills are required to manage cross-functional teams subject to strict deadlines and tight budget constraints. In this course we discuss all three phases of project management: project conception, execution, and closure. Issues related to project leadership, budgeting, and scheduling will be addressed in the course, and case discussions will highlight state of the art project management practices. Project management software will be introduced (possibly including group project using MS Project Software).

MGT 6670 Service Operations (1.5 to 3) Prerequisite: MGT 6060 or 6061.

This course aims to develop a better understanding of best practices in the service sector through analysis of leading-edge firms and the strategies they have employed to create and maintain competitive advantage. The course emphasizes the close coordination of marketing and operations in the design and implementation of service delivery processes. Topics include the importance of developing both human and technical skills among employees who represent the most critical point of contact between the service organization and its customers, and the role of technology, in particular information technology, in changing the nature of the service delivered and/or the way in which the service is delivered. The course relies heavily on the analysis of a number of case studies, and includes a group project where the principles developed in the course are applied to a real service organization.

MGT 6680 Product Innovation Consultation (1 to 4.5) Prerequisite: MGT 6040 & 6060.

The objective of this course is to provide real-world, hands-on, technology-based product development consulting experience to advanced level MBA students. This year-long course will involve lectures from several experienced guest speakers with expertise on various aspects of innovative product developments such as business plan development, valuation & financial analysis, marketing research, project management, intellectual property and legal issues, and negotiation, teamwork and leadership. MBA students will be assigned as "business consultants" to engineering student-teams working on new product development projects. While the technical nature of product development will be the focus of work performed by engineering students, the MBA student will collaborate with the engineering students to provide a rigorous analysis for the commercial viability of the project, and will advise the project teams on business and management aspects of their projects. Student teams will be jointly supervised by both engineering and business school professors.

MGT 6690 International Operations Management (1.5 to 3)

Approaches operations problems for global companies. Includes issues in facility location, productivity management, cultural production considerations, and global operations strategy.

MGT 6710 Strategy & Technology (1.5 to 3)

An introduction to the management of technology as a business activity. The focus is on the processes by which technological enterprises evolve, and on the technological innovation process in established technology-based firms. Special emphasis is placed on intellectual property issues and the management of knowledge. Heavy emphasis is placed on classroom analysis of published case studies of technological enterprises, together with readings which outline basic concepts applicable to the subject.

MGT 6810 Entrepreneurship and Emerging Business (1.5 to 3)

This course introduces the concept of the entrepreneur and of the role of the entrepreneur and innovator in the modern economy. It introduces the processes involved in identifying and defining opportunities in emerging industries and of developing

and refining the business concept. At the end of this course, the student should understand the potential of Entrepreneurship as a career option and should have completed the preliminary analysis for an entrepreneurial business idea. The course will involve extensive exposure to entrepreneurs and entrepreneurial ventures and will require a formal business concept paper. Students are encouraged to develop new venture teams with both classmates and outside business partners.

MGT 6969 Special Topics in Statistics (1 to 6) Cross listed as STAT 6969, ED PS 6969, ECON 6969.

Current topics in statistical methods. Prerequisites vary depending on the topic. Course format may be lecture, lab, or group projects.

MKTG 6090 Marketing Management (3) Prerequisite: Masters status in the School of Business.

Focuses on developing analytical skills to make basic marketing decisions: target market, positioning, and marketing mix. Instructional approaches include lectures, case analyses, and a competitive situation. Written and oral communication are stressed.

MKTG 6300 Marketing in the Information Age (1.5 to 3)

In the information age many products and services become more information intensive, making it possible to digitize part of their value chains and access them with a network. This course uses reading, cases, guest speaker, and a project to examine the impact of the Internet and related digital technologies on marketing and business. Specifically, it covers the marketing implication of information intensive products and services, business models for the information economy, and use of the Internet to perform marketing functions.

MKTG 6315 Consumer Relationship Management-Maximizing Profitability in Consumer Touch Points (1.5)

Course examines the realities of CRM-the strategies, products, processes, and people that are making it work and the lessons from those who aren't. Students analyze the role that technology, corporate culture, market segmentation, and metrics play in determining success. It will focus on how to equip and convert front-line, customer-facing employees into a more critical component of the profit model.

MKTG 6600 Marketing Analysis and Decision Making in an Information Age (3) Prerequisite: MKTG 6090 or 6091.

This course deals with concepts, methods, and applications of decision modeling to address marketing issues such as segmentation, targeting and positioning; new product design and development; advertising sales force, and promotion budgeting; and pricing. It will attempt to translate conceptual understanding into specific operational models that can be implemented on PC-based computer software.

MKTG 6860 Marketing Research (3) Cross listed as MKTG 7760. Prerequisite: MGT 6040.

Meets with MKTG 4450. Develops ability to design research. Stresses design of research strategy, data collection, use of multivariate statistics and computer analysis. Stresses elements of research common not just to marketing but all business research areas.

Section III Courses to Be Considered for the Business Pre-Requisite Requirement Only

ACCTG 2010 Financial Accounting (3) Prerequisite: IS 2010.

The first of a two-course sequence that provides a broad view of accounting information's role in supporting an organization's functions. Primary focus is financial use of accounting information.

ACCTG 2020 Managerial Accounting (3) Prerequisite: ACCTG 2010.

Second of a two-course sequence that provides a broad view of accounting information's role in supporting an organization's functions. Primary focus is management's use of accounting information.

ACCTG 3000 Survey of Accounting Fundamentals (3)

A broad survey of important topics in both financial and managerial accounting intended for business minors and other non-business majors.

ACCTG 5210 Management Accounting I (3) Prerequisite: ACCTG 2020.

Identification and development of relevant cost information for both manufacturing and non-manufacturing situations. Emphasis given to the regulatory, analytical, and behavioral use of accounting information.

FINAN 3000 Fundamentals of Investing and Business Finance (3) Prerequisite: College Algebra Fulfills Quantitative Intensive BS.

Introduction to investing and business finance: stocks, bonds, financial analysis and valuation, market access, risk and rate of return. For non-Business majors and minors.

MGT 2340 Business Statistics (3) Prerequisite: MATH 1100 and IS 2010. Fulfills Quantitative Reasoning (Statistics/Logic).

This fast paced class covers the fundamental statistical concepts of collection, analysis, and interpretation of business and economic data; measures of central tendency and dispersion; probability theory and probability distributions; sampling distributions and statistical inference, including estimation and hypothesis testing. Functional area cases from Finance, Marketing, Accounting and Operations are analyzed. Microsoft Excel is used for computation and descriptive purposes.

MGT 3440 Applications of Business Statistics (3) Prerequisite: Upper division status or MGT 2340. Fulfills Quantitative Reasoning (Statistics/Logic).

This practical and example-based course uses the essential tools and concepts of Six Sigma as a unifying framework. Discussion topics include design of experiments, goodness of fit, contingency tables, correlation analysis, nonparametric statistics, and an introduction to statistical process control. Moreover, hands-on skill is acquired for the development and interpretation of regression models from functional areas of accounting, finance, marketing and operations with a focus on depth rather than breadth of the subject material. Microsoft Excel is used to create graphical and numerical outputs with emphasis on interpretation of output. A comprehensive case write-up and presentation, integrating the essentials of course tools is prescribed as the end-of-term project. Business cases are used throughout the term for reinforcement purposes.

MGT 3660 Production/Operations Management (3)

Analyzes conversion function of a business, i.e., how inputs are transformed into useful products and services. Location, design of facilities, layout, equipment selection, work methods and measurement, production scheduling and control, inventory management, quality control, and operations strategy. Relevant to operations of both manufacturing and service systems.

MGT 3700 Fundamentals of Entrepreneurship (3)

This course is designed as an introduction to entrepreneurship and the processes of new ventures. This course may be taken as a stand-alone elective, or as the first in the core series for Entrepreneurship. Students will become familiar with entrepreneurship and ascertain the degree to which entrepreneurship represents a relevant personal career. The course will expose the student to a wide range of entrepreneurial ventures and provide the opportunity to work in a team to develop a Business Conceptualization -- the first step in the entrepreneurial process.

MGT 4650 Principles of Quality Management (3) Prerequisite: MGT 3440.

Introduction to the principles of quality management, with an emphasis on cross-functional problem solving. Topics include customer driven quality, leadership, employee participation and training, continuous process improvement, design quality and error prevention, management by fact, and strategic quality planning.

MGT 5660 Operations Strategy (3)

What makes some operations succeed while others die a quick or miserable death? Why do some of the best product or service ideas in the world fizzle instead of sizzle? What separates effective and inspiring operations managers from the mass of has-beens and also-rans, especially in times of trial? These are just some of the intriguing questions we will explore in this course on applying strategy development and execution to operations management. This is not a class on quantitative theory, mathematical models, software simulations, or financial analyses of annual reports. It is an honest, non-vanilla look at operations today in our global economy, and what works and what does not from the manager's desks to the front-line trenches. We will examine real companies, real decisions, real constraints and politics, and how people, technology, culture, market segmentation, competition, and metrics combine strategically to drive the success of manufacturing and service operations. Topics of discussion include operational measures of success, product selection, capacity and production planning, technology integration, customer service outsourcing, best practices implementation, CRM, fraud prevention and other contemporary issues. All management majors will be required to complete MGT 5510 or 5660.

MGT 5969 Special Topics in Statistics (1 to 6) Cross listed as ED PS 5969, FP MD 5969, MATH 5969, ECON 5969, FCS 5969, PSY 5969, SOC 5969, STAT 5969.

Topics vary. Taught by members of the University Statistics Committee. Check current class schedule for cross-listings.

MKTG 3010 Principles of Marketing (3)

Marketing primarily deals with customer-focused business issues that can determine the success or failure of a firm. In this course, we teach the "language of marketing," introduce the core concepts of effective marketing, and discuss the various factors that influence marketing decision making. We will concentrate on key business decisions concerning product attributes, promotional campaigns, pricing strategies, distribution efforts, market segmentation, and strategy formulation. We also present a framework for understanding the factors that affect a marketer's decisions and the role of marketing in a small businesses, corporations, and society. You will better understand these topics through some combination of lecture, textbook material, case discussions, videos, guest speakers from industry, and discussion of current marketing issues. This course is for Business Majors, Non-business majors are encouraged to take MKTG 3000.

MKTG 4020 Marketing Management (3) Prerequisite: MKTG 3000, 3010 or 3011. Fulfills Upper Division Communication/Writing.

Roll up your sleeves and see the results of your decision-making. This course is a hands-on analysis and actual decision-making journey in marketing strategy. Experience the power of strategy tools such as differentiation and positioning. We additionally study actual case histories and decisions made by real managers and executives--and see how they did. The conclusion of the course provides an opportunity to apply your knowledge of marketing strategy maneuvers and marketing management via computer simulation. Major marketing concepts, principles, and strategy are directly applied.

MKTG 4300 Internet Marketing (3) Prerequisite: MKTG 3000, 3010 or 3011.

Each era's dominant new technology brings about new marketing capabilities. In the information age, the internet has forced business to consider new ways of carrying out commercial strategies and tactics, and to use new business models in order to compete, both locally and globally. This course looks at this new business environment from theoretical, strategic, and tactical perspectives. The focus is on internet marketing for Business-to-Consumers, and Business-to-Business markets.

MKTG 4450 Marketing Research (3) Prerequisite: MKTG 3000, 3010 or 3011 and MGT 2340 and 3440.

What do customers want from the marketplace? Who will buy our product? Where should we locate our store? Good business decisions require the answers to hundreds of questions like these. Marketing research is the science of studying the marketplace to get solid answers to support good decision-making. In this class you will learn about different sources of business data (some that exists already and some that you will have to gather yourself), and spend the majority of the course focusing on the skills you need to design and perform good business research yourself. Among other techniques, you will learn about experiments and observation, surveys and interviews, focus groups and data analysis. This dynamic class brings together a whole array of tools that every good business person needs for effective decision making. You will use fieldwork, in-class exercises, discussion and lectures to cover basic principles first hand experiences, cases, and projects, as you study these important ideas.

MKTG 4500 Introduction to Advertising (3) Prerequisite: MKTG 3000, 3010 or 3011.

Advertising as an activity and strategic tool of marketing. Social and economic roles of advertising.

MKTG 4510 Advertising Management (3) Prerequisite: MKTG 3000, 3010 or 3011 and 4500.

Applying advertising theory and strategy; establishing good client-agency relationships; dealing with production suppliers and media organizations.

MKTG 4600 Marketing Analysis Decision Making in an Information Age (3) Prerequisite: MKTG 3000, 3010 or 3011.

This course uses Excel and other relatively user-friendly software to build models and decision aids to address marketing issues such as segmentation, targeting, and positioning; new product design and development; advertising sales force, and promotion budgeting; and pricing.

MKTG 5600 Marketing Analysis (3) Prerequisite: MKTG 3000, 3010 or 3011.

Meets with MKTG 6600. This course deals with concepts, methods, and applications of decision modeling to address marketing issues such as segmentation, targeting and positioning; new product design and development; advertising sales force, and promotion budgeting; and pricing. It will attempt to translate conceptual understanding into specific operational models that can be implemented on PC-based computer software.

Appendix B: Program Schedule

The following shows a sample schedule for students studying in MS IS starting in the fall semester. Students who study in MS IS part-time, starting in a different semester or required to take pre-requisite courses will have different schedules.

Course Prefix & Number	Title	Credit Hours
Fall Semester		
IS 6430	Systems Analysis and Design	3
IS 6481	Data Driven Strategies and Products	1.5
IS 6482	Data Mining	1.5
	Track or Elective Courses	3
	Sub-Total	9
Spring Semester		
IS 6010	MIS Fundamentals	1.5
IS 6420	Database Theory and Design	3
IS 6470	eBusiness	1.5

Course Prefix & Number	Title	Credit Hours
	Track or Elective Courses	6
	Sub-Total	12
Summer Semester		
IS 6595	Master's Project	3
	Track or Elective Courses	6
	Sub-Total	12
	Total Number of Credits	60

Appendix C: Faculty

Rohit Aggarwal will join the David Eccles School of Business at the University of Utah as an Assistant Professor of Information Systems. His research interests include studying the avenues and challenges posed by electronic word of mouth (weblogs, online discussion forums, online posted reviews and twitter) on businesses. Specifically, he investigates the underlying process that leads to the successful generation of eWOM and its implications. His research will help firms and institutional investors in understanding the value of eWOM and the ways to better utilize eWOM. He is also interested in investigating reputation mechanism design for online services exchange, and online agent design that facilitates bidding in an online products exchange. His research has been mentioned in popular press outlets such as Conde Nast-Portfolio, and has won research funding.

Randall J. Boyle received his Ph.D. in Management Information Systems from Florida State University in 2003. He also has a master's degree in Public Administration and a B.S. in Finance. His research areas include deception detection in computer-mediated environments, information assurance, the effects of IT on cognitive biases, the effects of IT on knowledge workers, and e-commerce. He has published in several academic journals such as *Journal of Management Information Systems* and *Journal of International Technology and Information Management*. He has received the college teaching award at the University of Alabama in Huntsville and has taught a wide variety of classes including Information Security, Telecommunications, System Analysis and Design, Decision Support Systems, and Web Servers.

David S. Glod, CPA, CISA, CISSP, CFE is a regular IS adjunct faculty to teach two IS courses in the security and audit area each year starting in 2008-2009. He has ten years of technology audit and security experience and has designed and developed numerous courses to share knowledge of IT auditing and security. David has a Master of Accountancy in Information Systems and a B.S. in Accountancy from the Marriott School of Management of the Brigham Young University.

Jeff Hassett has been a member of the IT industry for over 15 years. He has experience in database design and implementation, large project implementation and also security. He has completed large technology implementations for industry leader such as Walt Disney World, United Airlines and Square D Electronics.

Paul J. Hu is an Associate Professor and David Eccles Faculty Fellow at the David Eccles School of Business, the University of Utah. He received his Ph.D. in Management Information Systems from the University of Arizona. His current research interests include information technology applications and management in health care, organizational management of systems implementation, electronic commerce, digital government, human-computer interaction, and knowledge management. Hu has published papers in *Journal of Management Information Systems*, *Communications of the ACM*, *IEEE Transactions on*

Systems, Man and Cybernetics; IEEE Transactions on Information Technology in Biomedicine; IEEE Transactions on Engineering Management; IEEE Intelligent Systems; IEEE Software; Journal of the American Society for Information Science and Technology; Decision Sciences; Decision Support Systems; Social Science Computer Review; European Journal of Information Systems; Information and Management; Electronic Commerce Research; Journal of Telemedicine and Telecare; and Topics in Health Information Management. He received a Best Paper Award at the 33rd Hawaii International Conference on System Sciences. Hu has received research funding from *the National Science Foundation, the Hong Kong Research Grants Council, University of Utah, and Center for International Business Education and Research.*

Daniel McDonald received his Ph.D. in Management (Information Systems) from the University of Arizona in 2006. He also has a Master's of Science degree in Management Information Systems and a B.S. in Accounting. Prior to his Master's and Ph.D., Daniel worked in industry accounting and inventory management. His research interests include Decision Support, Intelligent Systems, and Text and Data Mining. He is interested in processing e-mail communication, business news, and medical research texts to find relevant relationships, including social and event information. He has published in a variety of journals including *ACM Transactions on Information Systems, Bioinformatics, IEEE Transactions on Information Technology in Biomedicine, Decision Support Systems, and the Journal of the American Society for Information Science and Technology.*

Tariq Mughal comes to DESB with fifteen years of experience in the aerospace industry. His experience constitutes in the areas of engineering analysis, project management, business development, finance and program management. While he was at United Airlines in San Francisco he developed a budget of \$2.2 Billion dollars for the acquisition and assimilation of U.S. Airways maintenance operations. He has masters in Mechanical Engineering and an MBA from University of Utah. His bachelors are in mathematics with emphasis in statistics. His primary responsibility at DESB is to teach undergraduate statistics classes and manage that program.

Gautam Pant is as an Assistant Professor at the David Eccles School of Business. He received his Ph.D. in Business Administration (Information Systems) from the University of Iowa. He also holds a Masters degree in Computer Science from Baylor University and a Bachelors degree in Computer Engineering from the University of Mumbai, India. His research focuses on searching, gathering, and analyzing Web-based information to gain actionable intelligence. He has worked as a software engineer for Computer Associates-TCG (India), as a research assistant for NEC Labs (Princeton), and GlaxoSmithKline R&D (King of Prussia). His research appears in *ACM Transactions on Information Systems, IEEE Transactions on Knowledge and Data Engineering, ACM Transactions on Internet Technology, and Information Retrieval.* His work also appears in the proceedings of highly selective international conferences such as *ACM SIGIR* and *ACM/IEEE JCDL.*

Joseph S. Pettit, Ph.D. is a regular Adjunct Faculty to teach two IS courses per year starting from 2008-2009. He is also a Program Delivery Manager for SAP Consulting, Palo Alto, CA and has over thirty years of system integration, business process re-engineering, organization development and general management experience as Client Delivery Director, Program Director, Program Delivery Manager, Senior Engagement Manager, Program Manager, Project Manager, Small Business Owner and General Manager in a wide-range of industries - Manufacturing, Automotive, Communications, Financial Services, Pharmaceutical, and High Tech. Dr. Pettit received his Ph.D. in Organizational Development from the

Carlson School of Business at the University of Minnesota and his M.S. in Industrial Relations from DESB and his B.A. from Psychology at the University of Utah.

Vandana Ramachandran is a Ph.D. Candidate in Information Systems at the Robert H. Smith School of Business, University of Maryland. She will join the Information Systems group in the David Eccles School of Business at the University of Utah in Fall 2008. Her research interests include economics of information systems, e-business strategies, new business models in electronic markets such as online infomediaries and sponsored search/advertising, and strategic impacts of IT in firms. Her dissertation focuses on examining how the explosion of decentralized information in online channels transforms the dynamics among buyers and sellers in both online retail markets and offline channels for durable goods, using econometric and clickstream modeling techniques. Her work is forthcoming in *Information Systems Research*, and is under review at *MIS Quarterly* and *Journal of Marketing*. She has also presented her research at several conferences including *ICIS*, *WISE*, *CIST-INFORMS*, *AOM*, *ACM* and others. She is also the recipient of research grants from the Net Institute (2005, 2007), the Stempler Award for Research on family owned/controlled businesses (2007), and the Dean's Fellowship for Summer Research (2003-2008).

Glen Schmidt's research interests include product innovation, new product development, and supply chain management. He has worked inside and/or studied firms in various industries including high-tech, heavy-duty equipment, automotive, and oil. Both his research and teaching materials have been recognized for their excellence by the Institute for Operations Research and the Management Sciences (INFORMS).

Olivia R. Liu Sheng is Presidential Professor and Emma Eccles Jones Presidential Chair of Information Systems at the David Eccles School of Business, University of Utah. She also directs the Global Knowledge Management Center (<http://gkmc.utah.edu>) to seek research and education extension of data driven business optimization. Her research focuses on data mining and optimization techniques for ebusiness management, customer analysis, customer profiling, personalization, recommendation, fraud/intrusion detection, bio-medical, digital government, telemedicine, telework and distributed learning applications. Her research has received funding from various Utah State agencies, Wasatch Advisors, Overstock, Optatio, U.S. Army, NSF, IBM, Tivoli, Toshiba Corp., Sun Microsystems, Hong Kong Research Grants Council, Asia Productivity Organization, SAP University Alliance, and Bureau of Land Management.

Dr. Sheng received the B.S. degree from the National Chiao Tung University in Taiwan, R.O.C. and the Master's and Ph.D. Degrees in Computers and Information Systems from the University of Rochester. She joined the faculty of Management Information Systems at the University of Arizona in 1985 and was the Department Head from 1997 to 2002. Dr. Sheng was visiting faculty at Hong Kong University of Science and Technology, Tokyo Institute of Technology, and Shanghai JiaoTung University. She has published over 50 papers in such journals as *Management Science*, *ACM Trans. On Information Systems*, *ACM Trans. On Internet Technology*, *Information Systems Research*, *INFORMS Journal on Computing*, *Communications of ACM*, *IEEE Trans. on Man, Machine and Cybernetics*, *IEEE Trans. on Biomedical Computing*, and *IEEE Trans. on Engineering Management*. She is on the editorial board for various journals including *Information Systems Research*.

Jeff Stratman is an Assistant Professor in the Management Department at the David Eccles School of Business, University of Utah. He received his Ph.D. in Business Administration with a concentration in Operations Management from the University of North Carolina at Chapel Hill in 2001. He holds a B.S.E. in Mechanical and Aerospace Engineering from Princeton University.

His research interests include operations strategy, the strategic use of information systems for supply chain management, enterprise resource planning (ERP) systems, and management of technology. He has published in *Production and Operations Management*, the *Journal of Operations Management*, *Decision Sciences*, *R&D Management* and *Supply Chain & Logistics Journal*, and has presented papers at national meetings of the Institute for Operations Research and the Management Sciences (INFORMS), the Decision Sciences Institute (DSI), and the Production and Operations Management Society (POMS). He is a senior editor for *Production and Operations Management*, and a member of the editorial review board for *Manufacturing & Service Operations Management*, and *Decisions Sciences*.

He was a member of the faculty of the College of Management at the Georgia Institute of Technology from 2000-2006. Prior to joining Georgia Tech, he had six years of experience as a manufacturing systems consultant with Andersen Consulting (now Accenture). He is certified in Production and Inventory Management through the American Production and Inventory Control Society (APICS).

Sriram Thirumalai is an Assistant Professor in the Management Department at the David Eccles School of Business, University of Utah. Sriram holds a Bachelors in Metallurgical Engineering from the Indian Institute of Technology (IIT) Madras, a Master of Science in Statistics from the University of Minnesota, and a Ph.D. in Operations Management from the University of Minnesota. Sriram's research interests are in the areas of Management of Technology, Supply Chain Management, Operations Strategy, and Health Care Operations. Sriram's research has appeared in the *Journal of Operations Management* and *Electronic Markets*. He serves a reviewer for various journals including *Journal of Operations Management*, *Production Operations Management Journal*, and *IEEE Transactions*.

Weiyu Tsai's research interests are in the areas of new product-service development and project management. Specifically, he studies the topics of design of new product-service bundle, new product preannouncement, design competition, and project scheduling and resource allocation. His teaching interests are in the areas of management science and operations management.

Don G. Wardell is Professor and Chair of the Department of Management at the University of Utah's David Eccles School of Business (DESB). He received BS and MS degrees in Metallurgical Engineering from the University of Utah, and a Ph.D. degree from Purdue University's Krannert Graduate School of Management. Dr. Wardell has taught at both the undergraduate and graduate levels, including teaching classes in Spanish at INCAE in Costa Rica. Dr. Wardell was honored with the University of Utah's Distinguished Teaching Award, the DESB's Masters Teaching Excellence Award, the Brady Superior Teaching Award, and the Marvin J. Ashton Award for Excellence in Undergraduate Teaching. His research interests are mainly in the areas of quality management and Six Sigma, and especially statistical process control. He has served as an associate editor for *Technometrics*, is a member of the editorial review boards of *Production and Operations Management* and *IIE Transactions on Quality and Reliability* and reviews articles for numerous journals.

Appendix D: Sample Industry Job Postings

This appendix lists various job postings on information systems that industry partners have hired or are seeking BS IS, MS IS or MBA graduates from the University of Utah to fill. Most of the positions shown here were sent by company recruiters to IS faculty.

Implementation Consultant, Omniture, Orem

Interaction: Internal & Clients (All Levels)

Reports to: Director of Implementation

Levels: Junior, Mid-career, Senior

How would you like to work for one of the fastest growing Software companies in Utah? Since going public in June of 2006, Omniture has become one of the most prominent and competitive web analytic companies in the market today. Headquartered in Orem, Utah, Omniture is the pioneer of next-generation online analytics technology. It is the only company in its market to offer a comprehensive view of activity on a company's website, including historical (data warehouse) and real-time analysis and reporting. Omniture has the highest level of retained and satisfied customers in the market, including eBay, AOL, Wal-Mart, Gannett, Microsoft, Oracle, Intel, GM and Hewlett-Packard.

The employees at Omniture are "the best of the best". They are smart, innovative, driven, and – most importantly – nice. At Omniture, we are looking for professionals in various areas of expertise. There are roles in Engineering, Marketing, Sales, Professional Services, and many others. A career at Omniture will not only provide extensive career advancement and experience, but also great benefits, competitive salaries and employee perks. If you are interested in joining our team, please apply online today!

Description

Implementation Consultants customize Omniture code to each client's exact business requirements and reporting needs, help each client implement code throughout their website, and perform quality checks to ensure that implementation has been completed thoroughly. Although not a programming position, it is certainly a very technical position with constant customer interaction. This position includes all of the following aspects:

- In-depth knowledge of client website, business model, and online marketing strategy.
- Heavy interaction and support on the phone and sometimes in person with client employees all the way up to the VP level of Fortune 500 companies
- Expert in
 - Internet and online marketing
 - Website analysis
 - JavaScript and other Internet technologies
- SiteCatalyst product expert
- Project management
- Technical writing

Responsibilities

- Gather client business objectives using internal methodologies and tools
- Client implementation training
- Perform technical pre-assessment with client's IT personnel and assist in development of the risk assessment.
- Write logic necessary within client software to generate required values for implementation of Omniture technology
- Coach clients throughout the implementation process
- Ensure that clients complete their implementations on schedule
- Document issues and best practices relating to specific platforms or configurations

- Debug implementation problems, JavaScript errors, and product functionality
- Maintain customer contact and daily status updates for all outstanding issues
- Manage customer relationship to ensure that expectations are realistic and that the client is happy
- Coordinate with engineering department to ensure timely closure of quality issues
- Fully understand and document customer requests, and assign appropriate resources to resolve any issues

Requirements

- Extensive knowledge of Microsoft Office, email, and how the Internet and websites work.
- Must be self-managed, responsive, and dedicated to customer support.
- Strong understanding of HTML and web protocols.
- Strong JavaScript skills
- Strong technical writing skills (writing samples helpful)
- Bachelor's degree

Special Consideration Given For

- Strong client service experience, preferably with Fortune 500 companies
- Degree in information systems or related field
- Master's degree or other advanced education
- Web development experience
- ERP or other software implementation experience
- Demonstrated exceptional customer skills from previous employment
- Project management experience
- Consulting experience
- Demonstrated programming skills (with samples) in languages such as Perl, C/C++, CGI, Java, ASP, VBScript, or PHP

Business Intelligence Analyst, Sharp Analytics, Salt Lake City

We are a rapidly growing services and technology division of iCrossing, the largest privately-held digital marketing company in the United States. Sharp Analytics is based in Salt Lake City, with analysts in Scottsdale, AZ, Chicago, and New York. We do consulting work, without the extensive travel and instability of normal consulting organizations. If you are looking for variety and fast-paced, interesting work, take a look at Sharp Analytics.

Job Description:

As a member of the Sharp Analytics Business Intelligence practice you will be responsible for systems analysis, design, and implementation of reporting and analytics systems. You will help provide technical support to the sales staff. You will meet with clients to identify project requirements, develop project plans and schedules, write, test and implement software according to the client's specifications. You will be required to interact with people at many levels within an organization, from the CEO to applications developers.

Job Functions:

- Interact with clients to establish applications and systems requirements for assigned projects.

- Create design specifications using current techniques and tools or techniques and tools required by the client.
- Establish timelines for project milestones.
- Develop SQL reports and reporting dashboards per customer specifications.
- Keep current with the latest versions of Business Intelligence software, techniques and practices. Research and develop new ideas in Business Intelligence and Enterprise Reporting strategies.
- Supervise projects and coordinate technical resources as needed within the scope of the project.
- Work within the development team to foster good communication throughout the project life cycle.

Skills needed:

Oracle is the foundation of all of our systems. The candidate should have some knowledge of SQL and relational database concepts. We also look for:

- Ability to deal with complex situations and collaborate effectively with local and remote personnel in order to provide fast and effective problem resolutions.
- Superior communication skills.
- Ability to work in a fast-paced environment.
- Must be team-oriented, possess excellent organizational and written skills, and demonstrate the ability to communicate with either a software developer or business audience.

Education and Experience Required:

The candidate should have (or be close to completing) a Bachelors or Masters degree in either Information Systems, Business Administration, Accounting or Statistics. He or she should also have 3+ years of proven success developing analysis or reports to answer strategic business questions.

Product Marketing Manager – Google Inc, Mountain View

Do you love Google? Interested in learning more about the marketing and business world at one of the most cutting-edge technology companies in Silicon Valley? Google is looking for flexible, hardworking, quick studies to analyze, measure, position, package and promote our product offerings.

Responsibilities include working with the Corporate Marketing, Sales, and Product Support groups to drive projects such as:

- Defining and implementing a customer communications strategy.
- Determining ROI on advertising expenditures.
- Defining market research studies to gain knowledge about user attitudes and behavior.
- Developing collateral that optimally positions the strengths of our products.

Requirements:

- BA/BS degree, MBA a plus.
- Ideal candidate will have four plus years experience in product marketing, direct marketing, marketing program management, or consulting.
- Passion for analyzing products, customers and market dynamics.
- Outstanding written and oral communication skills.
- Strong organizational and analytical skills.
- Demonstrated capacity for developing and understanding strategy.
- Strong aptitude for determining the optimal way to position products in the market.
- Understanding of the search and online advertising market.

- Understanding of Google's strategic and competitive position.
- Passion for working on a variety of product and search related challenges.

Senior Planning Analyst, Backcountry.com, Park City

Summary:

Backcountry.com has an outstanding opportunity for a Senior Planning Analyst. This position requires proven experience as a business or planning analyst with outstanding analytical and computer skills. Experience with planning and budgeting software required; outdoor retail, apparel, or ecommerce business experience is highly desired. The ability to develop new processes, lead and mentor others, and work well alone and within a team is a must.

This role is diverse and dynamic: the senior planning analyst is expected to make significant contributions to solving the challenges of forecasting and adjusting revenue, assortment, pricing, and inventory scenarios for our rapidly growing businesses.

- **Primary Responsibilities:** Evaluate and improve complicated business logic, and implement into daily company practices;
- Investigate and possibly implement third party planning and forecasting software for planning department;
- **Forecast & OTB:** take a lead role in bottom up and top down forecasting and reconciliation across website storefronts and product departments;
- **Analyze:** apply appropriate subjective business knowledge or department created algorithms to report data and existing forecasts to recommend short and long term action on product;
- **Product life cycles and seasonality:** report, analyze, and understand across brands, departments, and product segments;
- **Communicate, Present, Educate, Monitor:** frequent work with buying, marketing, and finance department staffs to successfully implement the planning departments strategy;
- Other duties as assigned.

Position Requirements:

- Experience as a business or planning analyst with a retailer or manufacturer of finished consumer products;
- Experience as a Buyer, Planner, or Analyst, in a high volume outdoor, apparel, or e-commerce retailer preferred;
- Proven ability to develop and implement new processes;
- Proven leadership skills;
- Outstanding analytical and/or statistical skill set;
- Bachelor's degree or commensurate experience in business, science, engineering, or computer field preferred;
- Excellent Microsoft Excel skills;
- Ability to write complicated SQL queries or related database expertise;
- Addition experience with Perl, Java, other programming languages, database design, and regular expressions a plus;
- Excellent written and verbal communication skills;
- Ability to perform under pressure, prioritize competing tasks, and schedule time wisely.

Junior CRM Analyst, Overstock.com, Cottonwood

- Responsibilities:
 - Retrieving, analyzing and interpreting data, identifying key business issues, and presenting recommendations in a concise, meaningful way, both orally and in a written format.
 - Assist in developing models to score customers and predict behavior.
 - Acting as the subject matter expert in regard to the company's customer data.
- Interpersonal skills:
 - Highly organized, self motivated, strong work ethic, detail orientated and thorough.
 - Ability to manage expectations of others and proactively keep others apprised of results and progress.
 - Ability to thrive and enjoy a fast paced, dynamic and entrepreneurial environment.
 - Strong presentation and team working skills. Ability to learn quickly and adapt in a dynamic environment with little direction.
- Minimum Technical skills: 1+ years of moderate SQL or programming. A solid understanding of statistics, including modeling techniques, correlation, and probabilities. Advanced Excel skills (pivot tables, regressions, vlookups etc.). MS Office proficiency.
- Bonus skills: SAS experience a big plus. Experience with techniques such as clustering, neural networks and decision trees. Experience with relational databases and reporting tools. CRM experience and knowledge.
- Education: Bachelor of Science in statistics, mathematics, econometrics or similar quantitative background/experience.

Senior CRM Analyst, Overstock.com, Cottonwood

- Responsibilities:
 - Retrieving, analyzing and interpreting data, identifying key business issues, and presenting recommendations in a concise, meaningful way, both orally and in a written format.
 - Assist in developing models to score customers and predict behavior.
 - Acting as the subject matter expert in regard to the company's customer data.
 - Managing ongoing model improvement and implementation.
 - Assisting with various other analysis and reporting as needed.
- Interpersonal skills:
 - Highly organized, self motivated, strong work ethic, detail orientated and thorough.
 - Ability to manage expectations of others and proactively keep others apprised of results and progress.
 - Ability to thrive and enjoy a fast paced, dynamic and entrepreneurial environment.
 - Strong presentation and team working skills. Ability to learn quickly and adapt in a dynamic environment with little direction.
- Minimum Technical skills: 2+ years of intermediate / advanced SQL or programming. 2+ years CRM analytics. Advance ability in statistics, including modeling techniques, correlation, and probabilities. Advanced Excel skills (pivot tables, regressions, vlookups etc.). MS Office proficiency. 2+ SAS experience or equivalent tools. Experience with techniques such as clustering, neural networks and decision trees. Experience with relational databases and reporting tools.
- Education: Bachelor of Science in statistics, mathematics, econometrics or similar quantitative background/experience. Masters degree preferred. Marketing experience preferred.

January 7, 2009

MEMORANDUM

TO: State Board of Regents
FROM: William A. Sederburg
SUBJECT: Utah Valley University–Master of Science in Nursing–Action Item

Issue

Utah Valley University requests approval to offer a Master of Science in Nursing (MSN) degree effective Fall Semester 2009. This program was approved by the UVU institutional Board of Trustees on October 9, 2008, and approved by the Regents Program Review Committee on December 2, 2008.

Background

The Master of Science in Nursing degree in the College of Science and Health was selected as the second of three master degrees to be offered at Utah Valley University. The selection was made based in large measure on community and professional need as well as the potential number of students seeking such a degree. A MSN degree preparing post-baccalaureate nurses for advanced roles as nurse educators is desirable due to the current nursing shortage hindered in part by lack of nursing faculty in academic settings and by the shortage of nurses practicing in clinical nurse educator roles in healthcare settings who are responsible for patient quality and safety outcomes.

Nursing education programs in Utah have been unable to meet the growing demand for registered nurses in part due to limitations in qualified nursing faculty. Healthcare was a leading industry in Utah for vacancies in 2005 and one of only three industries that witnessed a further increase in 2007. Forty-seven percent of healthcare's vacancies were open for longer than 60 days or considered "always open" by hiring employers, and nurses accounted for 43% of those vacancies. As of the 4th quarter 2007, registered nurse positions were on the top ten most difficult-to-fill occupations with a vacancy rate of 8.9% (Department of Workforce Services, 2007).

The Master of Science in Nursing program at UVU will prepare professional nurses to function in advanced practice roles as nurse educators, provide opportunity for professional growth for nurses

seeking advanced knowledge and skills especially in Utah County and southern areas of the state, and ultimately improve healthcare by providing a higher quality service to the public.

Policy Issues

Other Utah System of Higher Education institutions have reviewed this proposal, have given input, and are supportive of Utah Valley University offering this degree.

Commissioner's Recommendation

The Commissioner recommends that the Regents approve the Utah Valley University request to offer a Master of Science in Nursing, effective Fall Semester, 2009.

William A. Sederburg, Commissioner

WAS/GW
Attachment

Academic, Career and Technical Education and Student Success Committee
Action Item

Master of Science in Nursing

Utah Valley University

Prepared for
William A. Sederburg
By
Gary Wixom

January 7, 2009

Section I: The Request

Utah Valley University requests approval to offer a Master of Science in Nursing (MSN) degree program effective Fall 2009. This program was approved by the institutional Board of Trustees on October 9, 2008.

Section II: Program Description

Complete Program Description

The Master of Science in Nursing program prepares post-baccalaureate nursing students for advanced practice roles as nurse educators in academic settings and/or clinical nurse educators in healthcare institutions. The program includes core courses essential to master-level nursing programs as well as courses designed to prepare nurses to assume roles as academic nurse educators and/or clinical nurse educators. Program content focuses on theoretical foundations of nursing education and leadership; tests and measurements of learning outcomes; curriculum development, implementation and evaluation; and academic and clinical teaching. Program courses provide skills and strategies for facilitation of learning in a variety of settings.

Purpose of Degree

The purpose of the Master of Science in Nursing degree is three fold: 1) to provide access to graduate nursing education in Utah County and southern areas of the state, 2) to increase the number of academic and clinical nurse educators available in Utah and beyond, and 3) to improve access to quality nursing education for greater numbers of undergraduate nursing students. Only one graduate level nursing program is currently offered in Utah south of Salt Lake County (the Family Nurse Practitioner program offered at Brigham Young University). The proposed Master of Science in Nursing program would offer additional opportunities for baccalaureate prepared nurses to continue their education in addition to increasing the number of nurse educators employed in academic and healthcare settings. The current lack of qualified nurse educators in academic and clinical settings negatively impacts the number of students able to graduate from professional nursing programs (National League for Nursing, 2005). By increasing the number of qualified nursing faculty, more students can be accepted into nursing programs thereby decreasing the nursing shortage of both professional nurses working in healthcare institutions and nursing faculty working in academic settings.

In today's healthcare environment, professional nurses are critical for patient safety and quality patient outcomes. The current shortage of nurses and nurse educators is compounded by the aging nursing workforce, and more importantly, the aging of nursing faculty. The proposed MSN program will add to the quality of patient care by increasing the level of education for nurses who desire to contribute to nursing through education rather than/or in addition to direct patient care roles. Graduate level education allows nurses to be used within varied healthcare environments in multiple ways including mentoring of undergraduate nurses and unlicensed personnel, clinical nurse education, and management of nursing units. Providing graduate level education also increases available pools from which to obtain future academic and clinical faculty members proactively meeting current market demands.

Institutional Readiness

Utah Valley University is in the process of developing the first three graduate programs in the areas of nursing, education and business. For this development, a UVU Graduate Council has been formed to review the process and provide leadership regarding admissions, curriculum and policy. The institution

anticipates the organization of an office of graduate studies in the future as necessary. In addition, the Department of Nursing has established a MSN committee to oversee department graduate level program issues regarding curriculum design, admission requirements, faculty qualifications, policies and program outcomes.

The existing structure in the College of Science and Health--under the direction of the dean and in coordination with the chair of the Department of Nursing, nursing faculty and staff--is well prepared to initiate the proposed MSN program. The MSN degree is strongly supported by the University President, Vice President for Academic Affairs, Dean of the College of Science and Health, Chair of the Department of Nursing, and nursing faculty.

It is anticipated that most classes will be offered in the evenings or as once-a-week block classes to accommodate the graduate nurse population already employed full-time in the nursing profession. Thus, classroom space should not be problematic given the decreased demand for evening or weekly block classes that are not offered during prime time. With the addition of two faculty and one administrative assistant positions allocated to the proposed program, some minor adjustments will be necessary for appropriate office space.

The Department of Nursing anticipates that current and proposed newly hired faculty will teach the majority of the graduate courses and serve as project committee chairs and committee members while also teaching in the undergraduate program. Growth of the program and funds allocated in conjunction with university status for UVU will allow hiring of necessary faculty and administrative support.

The MSN program will positively impact the undergraduate degree program with the addition of two new faculty members teaching across both curricula who bring additional expertise and diversity to the current nursing faculty. Undergraduate students also benefit by interaction with graduate students/nurses who serve as role models and provide professional allies within the work force. The addition of the MSN program with the resulting increase in professional expectations and diverse student culture raises the level of the nursing program offered at UVU and increases graduate marketability.

Faculty

Two new faculty members will be hired to cover graduate and undergraduate coursework, supervision, graduate committees, advisement responsibilities, program coordination, accreditation and scholarly work for the first five years of the program. One faculty member is needed for the first year of the program with an additional faculty member needed in the second year. No additional faculty members will be required for years three through five. New faculty will work in both the graduate and undergraduate programs where their expertise optimally benefits program coursework and student learning.

Year 1	Year 2	Year 3	Year 4	Year 5
1 faculty	1 faculty	No new	No new	No new

Current PhD and EdD nursing faculty members are educationally prepared to offer the MSN program in years one through five. These faculty members hold earned doctorates with varied professional emphases such as nursing education, educational administration, nursing informatics and adult education. The same level of preparedness will be required of new hires during years one and two. No additional formal

preparedness will be required for this program, although two faculty members are currently active in PhD/EdD programs.

In addition, the Department of Nursing has established an Education Committee to facilitate educational opportunities for faculty to assure continued expertise and currency in nursing education standards and practice for graduate nursing education programs as assessed and accredited by the National League for Nursing Accrediting Commission (NLNAC) and the Commission on Collegiate Nursing Education (CCNE). Professional development workshops and seminars will continue to be facilitated by the Department of Nursing with guest scholars invited for discussion and problem solving seminars related to graduate level nursing curriculum, standards and accreditation requirements, and other topics or needs as identified by UVU Department of Nursing faculty.

The Department of Nursing is comprised of 17 full-time instructional faculty members. Of these faculty, seven currently have terminal degrees (either PhD or EdD) in a variety of nursing and education fields, two faculty members are currently in doctoral programs, and eight have MS degrees. Eleven faculty members are tenured to the Department of Nursing and six are currently on tenure-track.

Full-time Faculty: Degrees

Doctorate	Active in Doctoral Programs	Master
7 (41%)	2 (12%)	8 (47%)

Full-time Faculty: Tenure Status

Tenured	Tenure-track	Non-tenure-track
11 (65%)	6 (35%)	0 (0%)

While the Department of Nursing employs several adjunct faculty members in the undergraduate program on an as-needed basis dependent upon program admission numbers, they are utilized only in clinical settings (at healthcare institutions) to supervise nursing students in direct nursing practice and are not utilized as instructional faculty in the academic classroom setting on the UVU campus. Adjunct faculty are typically educated at the master level. It is not anticipated that adjunct faculty will be utilized in the proposed MSN program.

Staff

Because of the increase in clerical work anticipated due to the MSN program, an additional full-time administrative assistant will be needed beginning the first year the degree is offered. No additional staff resources are anticipated years two through five.

Library and Information Resources

A new state-of-the-art library has been constructed on campus and is operational as of Fall 2008. This facility provides exceptional academic support to both undergraduate and graduate students. Current holdings have been sufficient to support the associate and baccalaureate nursing programs and university funding has been set aside to grow the collection. In addition, students and faculty can obtain virtually any journal article that is unavailable in print or full-text at UVU through Interlibrary Loan. This free service provides UVU faculty and student's copies of journal articles emailed directly to them and is available from the UVU library homepage.

Utah Valley University belongs to the Utah Academic Library Consortium. Membership in the Consortium provides access to a number of indices, most of which contain full-text articles. Major nursing indices owned by UVU include: Alt-Health Watch, CINAHL Plus Full Text, The Cochrane Library, Health Source: Nursing/Academic Edition, MEDLINE, PubMed, OVID Full Text, and Science Direct Life and Health. Supporting indices include: Academic Search Premiere, Health Course: Consumer Edition, LexisNexis Academic, PsycArticles, Psych Info, Psychology and Behavioral Science Collection and SIRS Researcher. The recent addition of the Cochrane Library Database brings the world's best medical research studies to UVU and is recognized as the gold standard in evidence-based healthcare literature. The Cochrane Library contains high quality, independent evidence to inform healthcare decision-making and includes reliable evidence from Cochrane and other systematic studies, clinical trials, and more.

Along with the above mentioned resources, a subject matter specialist for nursing and health sciences has been designated by library administration for student consultation and assistance.

Admission Requirements

Acceptance into the MSN program will be based on information from the following:

1. Application for admission to the MSN program.
2. Baccalaureate degree in nursing from a program accredited by the National League for Nursing Accrediting Commission (NLNAC) or the Commission on Collegiate Nursing Education (CCNE).
3. Current licensure as a registered nurse in the State of Utah or eligibility for registered nurse licensure with completion of licensure process within 90 days of coursework commencement.
4. Completion of an undergraduate course in statistics which included descriptive and inferential components.
5. Submission of Graduate Record Exam (GRE) scores.
6. Overall undergraduate GPA of 3.2 or higher or GPA of 3.2 or higher in the last 60 semester hours of undergraduate coursework.
7. Three professional letters of recommendation from referees who can assess applicant potential for success.

Student Advisement

Graduate student advisement is traditionally supervised by graduate nursing faculty serving as committee chairs and members. Upon acceptance to the MSN program, students will meet with the Department of Nursing Advisor and the MSN Committee chair for assistance with the registration process. The MSN Committee chair will continue advisement until a committee chair is selected by each student during the first semester of the program. Students will select a committee chair and members and complete the committee selection form at which time the selected committee chair will assume advisement and mentoring responsibilities. The selected committee chair will continue advisement and mentoring of the student through the remainder of the program. The MSN Committee chair and the Department of Nursing Advisor will meet with students prior to program completion to clear all students for graduation. Committee chairs will mentor students through the program; meet with students as needed but at least once each semester to monitor progress; support students through project/thesis proposal, implementation and completion; participate in project/thesis defense; and sign-off on program completion forms. Committee members will assist the committee chair and support students in a similar fashion.

Justification for Graduation Standards and Number of Credits

Graduation standards listed below will demonstrate student acquisition of intended program outcomes and standards:

1. Completion of all courses with a grade of B or better (GPA of 3.0 or better).
2. Graduate project/thesis completed, defended and accepted by the Department of Nursing MSN Committee.

The Master of Science in Nursing program requires 31–35 credit hours (dependent upon the number of project/thesis hours) which is within the recommended credit levels established by the Utah System of Higher Education and similar programs throughout the country.

External Review and Accreditation

During program development, similar programs were examined regarding curriculum design, admission requirements and graduation standards. University of Northern Colorado, California State University, Idaho State University, University of Arizona, Indiana University and University of Utah nursing education master level programs have curriculum and instruction programs similar to the MSN program proposed by the UVU Department of Nursing.

Accreditation standards for master level nursing programs were also examined as published by the National League for Nursing Accrediting Commission (NLNAC) and the Commission on Collegiate Nursing Education (CCNE). The MSN program curriculum was developed using NLNAC graduate program standards and the National League for Nursing Core Competencies of Nurse Educators. It is anticipated and intended that the program will comply with accreditation standards and successfully achieve accreditation. The undergraduate nursing program has maintained continuous NLNAC accreditation since 1991 with the most current accreditation received in October 2003. The MSN program will also request accreditation through the NLNAC with anticipated review in spring of 2011. No additional costs other than costs incurred for the actual accreditation review are anticipated in achieving accreditation status.

Projected Enrollment

Year	Student Headcount	# of Faculty	Student-to-Faculty Ratio	Accreditation Req'd Ratio
1	12	1	1:12	No Requirement
2	24	2	1:12	
3	24	2	1:12	
4	24	2	1:12	
5	24	2	1:12	

Expansion of Existing Program

The MSN program builds on very successful associate and baccalaureate nursing programs. The UVU NCLEX-RN pass rates are consistently above the national average, jurisdiction (state) average, and similar program average. Utah Valley University has a long history of graduating quality nurses who remain in the local area and provide quality professional nursing services to the community.

The number of RN graduates, NCLEX-RN examination results and over abundant applications to the existing associate and baccalaureate programs suggest the experienced faculty know how to educate

nurses. Seasoned faculty are prepared to share their expertise with other nurses interested in advancing their knowledge in the nurse educator area of specialization.

Section III: Need

Program Need

The Master of Science in Nursing degree in the College of Science and Health has been selected as the second of three master degrees to be offered at Utah Valley University. The selection was made based in large measure on community and professional need as well as the potential number of students seeking such a degree. A MSN degree preparing post-baccalaureate nurses for advanced roles as nurse educators is desirable due to the current nursing shortage hindered in part by lack of nursing faculty in academic settings and by the shortage of nurses practicing in clinical nurse educator roles in healthcare settings who are responsible for patient quality and safety outcomes.

In 2002, the National League for Nursing recommended the development of master level programs that prepare beginning nurse educators stating that the nurse educator role requires specialized preparation and every individual engaged in nursing academics must be prepared to implement the role successfully. To add to this concern, Schools of Nursing across the nation are suffering from a sustained and expanding shortage of nursing faculty, which prevents these institutions from admitting many qualified students who are applying to their undergraduate programs. The NLN 2002 Faculty Survey (National League for Nursing, 2005) concluded that not enough qualified nurse educators exist to teach the growing number of nurses needed to ameliorate the nursing shortage. The survey further emphasized that the situation is not expected to improve in the near future since an inadequate number of nurse educators are currently in the education pipeline.

According to the survey, an average of 1.3 full-time faculty members per program left their positions in nursing education in 2002. Half of survey respondents had at least one unfilled, budgeted full-time faculty position at their institution and some reported as many as 15 such positions. Of those leaving nursing faculty positions, 37% did so due to retirement. It is interesting to note that approximately 9% of those responding to the survey were 61 years of age or older. Seventy five percent of the current faculty population is expected to retire by 2019 (National League for Nursing, 2005).

Health Resources and Services Administration (2007) projects that more than one million new registered nurses will be needed in the U.S. healthcare system to meet the demand for nurses by the year 2020. Although interest in nursing careers remains strong, many seeking to enter the profession cannot be accommodated in nursing programs due to faculty constraints. The primary barriers to accepting all qualified students to nursing programs continues to be insufficient faculty, placement sites and classroom space (American Association of Colleges of Nursing, 2007). According to the 2007 Journal of American Medical Association, more than 42,000 qualified nursing school applicants were turned away from nursing schools last year, compared with less than 5,000 in 2002 simply due to nursing faculty shortage (Robert Wood Johnson Foundation, 2008). To add to the dilemma, the percentage of nurses educated in baccalaureate and higher degree programs increased at a rate faster than those who received their initial nursing education at the associate degree requiring a further increase in nursing faculty (Health Resources and Services Administration, 2006).

In addition to the shortage of nursing faculty teaching in academic settings, nurse educators practicing in healthcare institutions are also in demand given the increase in patient acuity, the focus on patient safety and quality outcomes, and the shift to master level nurses in management and clinical education positions often mandated by hospitals pursuing magnet status such as our local Intermountain Healthcare. The Institute of Medicine (2004) acknowledged in their Quality Chasm series Keeping Patients Safe that nurse staffing levels, the knowledge and skill level of nursing staff and the extent to which they collaborate in sharing their knowledge all affect patient outcomes and safety. By increasing the number of nurses prepared at the graduate level who are employed in healthcare institutions either in the role of nurse educators or at the point of care, skill level and collaboration among nursing professionals has the potential to positively increase patient outcomes and safety.

Labor Market Demand

Nursing education programs in Utah have been unable to meet the growing demand for registered nurses in part due to limitations in qualified nursing faculty. Healthcare was a leading industry in Utah for vacancies in 2005 and one of only three industries that witnessed a further increase in 2007. Forty-seven percent of healthcare's vacancies were open for longer than 60 days or considered "always open" by hiring employers, and nurses accounted for 43% of those vacancies. As of the 4th quarter 2007, registered nurse positions were on the top ten most difficult-to-fill occupations with a vacancy rate of 8.9% (Department of Workforce Services, 2007).

It is projected that need for registered nurses in Utah will increase 5% annually from 2004 to 2014. With a projected 49.6% increase over the decade, the registered nurse profession will grow much faster than the average occupation/profession. By comparison, annual percent increase in need for registered nurses nationwide is projected at 2.9%. Employment for registered nurses in Utah will increase from 16,270 in 2004 to a projected 24,340 in 2014 with total annual openings reported at 1,150 (Department of Workforce Services, 2007).

Nurse faculty projections for Utah are similarly bleak with a projected annual increase of 4.2% from 2004 to 2014. Current employment numbers for nurse faculty positions are projected to rise from 470 in 2004 to 670 in 2014 with total annual nurse faculty position openings projected to be 30 (Department of Workforce Services, 2007). The current and obvious growing need for faculty is contributing to the existing nursing shortage by limiting the number of students nursing programs are able to accommodate. The situation only grows exponentially with time as Utah's population ages and current nurse faculty retire without being replaced, further limiting the ability to educate baccalaureate and post-baccalaureate nurses in a time when an aging population will require more complex nursing care.

Given market demands, opportunity for and need of graduate level nurses in nurse educator roles are vital to quality nursing education in academic settings as well as quality patient outcomes and safety in healthcare institutions. In addition, newly developed State Board of Nursing policy and American Association of Colleges of Nursing recommendations propose that academic nurse faculty be prepared specifically in nursing education with corresponding courses focusing on educational philosophy, theory and pedagogy.

The Master of Science in Nursing program at UVU will prepare professional nurses to function in advanced practice roles as nurse educators, provide opportunity for professional growth for nurses seeking advanced knowledge and skills especially in Utah County and southern areas of the state, and ultimately improve healthcare by providing a higher quality service to the public.

Student Demand

A survey conducted in 2008 across Utah County hospitals (Utah Valley Regional Medical Center, Orem Community Hospital, American Fork Hospital, Mountainview Hospital and Timpanogos Hospital) revealed that of the 42 nurse managers and clinical educators participating in the survey, only 10% were academically prepared at the master level. Of those not educated at the master level, 69% reported plans to return to the academic setting to further their education.

Of 236 staff nurses participating in the survey, 47% planned to return to pursue advanced degrees with only one staff nurse reporting current educational preparation at the MSN level. Current undergraduate nursing students participating in the study (147 students) reported the largest percentage of participants desiring further education upon completion of their current programs with 73% planning to pursue advanced nursing degrees. Ninety three percent of survey respondents (N=426) reported home of residence as Utah County.

Utah Valley University has a strong undergraduate nursing program with a reputation for preparing excellent registered nurses who typically remain in Utah County and work in the local community after graduation. Nurses in this county, especially former UVU graduates, prefer to remain in Utah County to continue their education. Many former undergraduates have expressed a desire to return to UVU for graduate level preparation and are anxiously awaiting the offering of the MSN degree.

Based on survey projections, it is estimated that the number of qualified students applying to the program will exceed the capacity of the program. This excess of qualified applicants holds true for both the associate and baccalaureate nursing programs currently offered at UVU.

Similar Programs

Survey participants were asked to select the top three master level programs of interest if answering "yes" to the question of intent to pursue an advanced nursing degree in the near future. The following advanced degree programs appear in rank order as selected by survey participants:

Type of MSN program	Nurse Practitioner	Nurse Anesthetist	Nursing Education	Nursing Administration	Nurse Generalist
# of responses	271	179	172	122	66

Review of nursing programs offered at the master level in Utah revealed only the nurse practitioner program currently available at Brigham Young University being within close proximity to nurses in Utah County who desire this type of advanced nursing degree. Westminster College currently offers the nurse anesthetist program. While MSN programs in nursing education exist at the University of Utah, Westminster College and Weber State University, none are close enough geographically to adequately fill the needs for Utah County and the geographic region that UVU serves.

Furthermore, the need for academic nurse educators exceeds all current offerings of such programs statewide. The offering of a MSN program with an emphasis in nursing education by UVU provides more nurses adequately prepared to teach at entry level faculty positions now and in the future and decreases statewide faculty shortages. In addition, the UVU MSN program will provide opportunities for nurses

currently residing in Utah County to replace current UVU faculty expected to retire in the near term. Fifty percent of current UVU nursing faculty are anticipating retirement by 2018.

The UVU MSN program differs from other programs offered in the state by incorporating the clinical nurse educator role in addition to the role of the academic nurse educator in curriculum offerings. Clinical nurse educators typically practice in healthcare institutions where their responsibilities include educating nursing staff as to current and changing practice, improving patient safety, and improving quality patient outcomes.

Collaboration with and Impact on Other USHE Institution

The Chair of the UVU Department of Nursing conferred with the Dean of the University of Utah College of Nursing and the Chair of Weber State University's Department of Nursing regarding UVU's intent to offer the proposed MSN degree. Both acknowledged the national and local need for additional nurse educators and extended their support for the program. Currently, the University of Utah and Weber State University are the only USHE institutions offering a MSN degree with an emphasis in nursing education.

Additional conversations were held with the Dean of Nursing at Brigham Young University who also extended her support and acknowledged the need for such a program given the newly developed State Board of Nursing policy and American Association of Colleges of Nursing recommendations requiring that academic nurse faculty be prepared specifically in nursing education with corresponding courses focusing on educational philosophy, theory and pedagogy.

It is anticipated that the UVU MSN degree will have little impact on other USHE institutions since Weber State University serves the needs of the state north of Salt Lake City and the University of Utah serves the Salt Lake County area. The MSN program at UVU would serve the needs of nurses seeking advanced degrees in areas south of Salt Lake County.

Benefits

The MSN program will benefit UVU by educating nurses to teach at entry-level faculty positions now and in the future, thereby providing opportunity for nurses currently residing in Utah County to replace UVU faculty expected to retire in the next ten years. In addition to preparing contract faculty, the program will prepare adjunct faculty necessary for supervising students during clinical practicum experiences in healthcare institutions. By increasing the clinical nurse educators employed at healthcare institutions, greater resources exist for the UVU Department of Nursing to draw on when filling adjunct faculty positions. By offering the MSN degree UVU is addressing the critical shortage of nursing faculty statewide thereby positively impacting the entire USHE system.

The MSN degree provides opportunities for career advancement, increased knowledge and personal growth for nurses desiring progression in their professional and personal development. Graduates of this program also increase the pool of likely candidates to continue through a doctoral program such as that offered at the University of Utah.

Consistency with Institutional Mission

Utah Valley University Mission Statement

Utah Valley University is a teaching institution which provides opportunity, promotes student success, and meets regional educational needs. Building on a foundation of substantive scholarly and creative work,

UVU fosters communities of engaged learners. The university prepares professionally competent people of integrity who, as life-long learners, serve as stewards of a globally interdependent community.

Utah Valley University is a regional teaching university where research and scholarship focus on applied research. As a regional state university and in keeping with the UVU mission and roles, the addition of the MSN program by the Department of Nursing will offer a comprehensive set of nursing programs at the associate, baccalaureate and graduate levels. The MSN program will offer opportunities for graduate level education to nurses in the UVU community and region as well as nurses in southern areas of the state. This level of education is designed to provide opportunity for students to address their educational and personal growth needs, foster student success in a profession that requires life-long learning, and meet ever-growing regional educational needs in healthcare.

The MSN program promotes economic and cultural development throughout the UVU community, region and state with a strong commitment to meet current and future workforce needs for clinical nurse educators and academic nurse educators. The proposed degree strengthens the professional base of nursing by preparing nurses with requisite knowledge and reasoning skills to expand the role of the baccalaureate nurse in order to influence patient outcomes through nursing education in both academic and healthcare institutions. Consultants who studied university readiness suggested nursing as one of three areas ready to move forward with a graduate program given faculty readiness and community demand.

Section IV: Program and Student Assessment

Program Assessment

The MSN program will be evaluated using similar techniques proven successful by the UVU Department of Nursing in meeting the National League for Nursing Accrediting Commission (NLNAC) standards in the past. The four required measurements set by the NLNAC for program evaluation include graduation rates, performance on licensing/certification examinations, job placement and program satisfaction. These four indicators will continue to be utilized as evaluation measurements in the MSN program.

Graduation rates will be compiled along with attrition rates. The MSN committee will review these measures following the completion of each cohort of students and track information regarding causes (if any) of students' failure to graduate. Necessary changes in the program will be determined according to the data obtained.

All students entering the MSN program must have obtained licensure as a Registered Nurse (RN) prior to admission. As discussed in Expected Standards of Performance below, students will be educated in accordance with necessary requirements to make them eligible to take the Certified Nurse Educator Examination. Since those sitting for the examination, however, must be in teaching positions for a minimum of two years prior to examination application, measurement of this criterion will be deferred until students meet eligibility requirements. Students will be surveyed regarding their desires to take the examination and while not expressly used for program evaluation, the extrapolated data will be evaluated. Job placement and program satisfaction will be assessed through student and employer surveys. It is anticipated that many prospective students will already be employees of healthcare institutions in the area. Therefore, the survey to employers will focus on whether the degree is needed/desired for jobs in question and whether students were able to be advanced within the organization with the completion of their Master

Degree. Questions will also be posed to evaluate preparation with the essential skills required by employers for job descriptions in which MSN level education is required or desired.

Students will be surveyed to evaluate similar objectives as employers. These may include satisfaction of the program and its components, skill acquisition for desired job placement, availability of jobs with MSN level education required/desired in the areas to which students aspire and whether or not students desire to take certification examinations. Students will also be surveyed as to whether their education was sufficient for application to certifying examinations.

Expected Standards of Performance

The standards of performance for the MSN program were derived from numerous sources including accreditation standards from both NLNAC and CCNE, certification requirements as identified by the Certified Nurse Leader and Certified Nurse Educator examinations and expressed desires by representatives from institutions throughout the greater Wasatch Front area. The program and its individual courses were developed specifically to provide essential knowledge and skills as identified by these sources to improve education of healthcare providers and to ultimately apply this expanded education to improve patient safety and quality outcomes.

The following standards were chosen by the MSN committee as evidence of meeting essential competencies associated with MSN education. Students will be expected to meet the standards through completion of the provided evaluation methods.

1) Function as a leader in the professional healthcare team.

This standard will be evaluated through surveys sent to employers and students concerning job placements, and through assignments and portfolio development throughout the courses in the MSN program.

2) Function as a change agent at the point of care and within the healthcare system.

Students will complete assignments/projects in a number of courses designed to provide skills at identifying and/or creating opportunities for change within the organizations in which students are employed or desire to become employed. The applicability and sustainability of these changes will be identified through faculty evaluation of assignments/projects.

3) Develop and implement programs to achieve educational outcomes based on learners' needs.

Several courses within the program are designed to support students in accomplishing this goal. The successful completion of student selected Synthesis Projects as evaluated by MSN faculty and the acceptance and successful completion of the master level Thesis/Project as evaluated by the MSN committee and Thesis committee provide evidence that students have demonstrated this standard of performance.

4) Evaluate evidence and utilize valid evidence to:

- a) Understand reliability and validity of research and publications, and
- b) Be discriminating and discerning regarding the quality of literature and research.

Students will have opportunities to compare and contrast research literature through research, theory and outcome evaluation courses. Evaluation of this standard will culminate in the Synthesis of Teaching

Practice course and through successful completion of the master level Thesis/Project where students are required to apply learned concepts.

5) Gather, evaluate, and utilize evidence for the improvement of patient outcomes. Evidence based practice is essential in modern nursing and healthcare. The ability of students to obtain, evaluate and utilize evidence is woven into each course and will be ultimately measured through Thesis/Project completion at the end of the program.

6) Facilitate the development, implementation and evaluation of health policy and healthcare delivery. A core course within the MSN curriculum is Advanced Nursing in Health Systems and Policy. This course provides essential legal and ethical considerations of nursing education from a systems perspective. As the entire MSN program is developed to help students make changes within health systems and provide evidence based practice, the above standard will be evaluated through assignments within the Advanced Nursing in Health Systems and Policy course and through the final Thesis/Project and Synthesis Project.

7) Create a product that advances the science and profession of nursing at the point of care in healthcare delivery, nursing education, or safety and quality practices. The Thesis/Project and Synthesis courses culminate this program. Upon completion of these courses and the program, students will have completed professional portfolios, research, education proposals/assessments, policy development, and Theses/Projects. These will be the foundation for evaluating students' ability to create quality products and advance the science of nursing.

Section V: Finance

Financial Analysis Form

	Year 1	Year 2	Year 3	Year 4	Year 5
Students					
Projected FTE Enrollment	11.33	22.67	22.67	22.67	22.67
Cost Per FTE	\$13,456	\$11,658	\$12,016	\$12,481	\$12,964
Student/Faculty Ratio	11.33	11.33	11.33	11.33	11.33
Projected Headcount	12	24	24	24	24
Projected Tuition					
Gross Tuition @\$300 per credit	\$102,000	\$204,000	\$204,000	\$204,000	\$204,000
Tuition to Program	See Note	See Note	See Note	See Note	See Note
5 Year Budget Projections					
	Year 1	Year 2	Year 3	Year 4	Year 5
Expense					
Salaries & Wages	\$92,000	\$166,400	\$173,056	\$179,978	\$187,177
Benefits	\$52,500	\$86,840	\$90,314	\$93,926	\$97,683
Total Personnel	\$144,500	\$253,240	\$263,370	\$273,904	\$284,861
Current Expenses	\$7,000	\$9,000	\$7,000	\$7,000	\$7,000

Travel	\$1,000	\$2,000	\$2,000	\$2,000	\$2,000
Capital	\$0	\$0	\$0	\$0	\$0
Library Expense	\$0	\$0	\$0	\$0	\$0
Total Expense	\$152,500	\$264,240	\$272,370	\$282,904	\$293,861
Revenue					
Legislative Appropriation	\$50,500	\$60,240	\$68,370	\$78,904	\$89,861
Grants & Contracts	\$0	\$0	\$0	\$0	\$0
Donations	\$0	\$0	\$0	\$0	\$0
Reallocation	\$0	\$0	\$0	\$0	\$0
Tuition to Program	\$0	\$0	\$0	\$0	\$0
Fees	\$0	\$0	\$0	\$0	\$0
Other (Projected Tuition)	\$102,00	\$204,000	\$204,000	\$204,000	\$204,000
Total Revenue	\$152,500	\$264,240	\$272,370	\$282,904	\$293,861
Difference					
Revenue-Expense	\$0	\$0	\$0	\$0	\$0

Comments

Note: UVU does not allocate tuition revenues directly to any programs. The projected gross tuition would only be available for allocation if UVU enrollments in total increased. Then, increased tuition revenue would be allocated through UVU's Planning, Budgeting and Accountability process.

Funding Sources

The Master of Science in Nursing degree is one of the three programs included in the Utah Valley University Rationale for University Status budget request. From the \$10 million allocation, the Department of Nursing was allocated two Master Degree faculty members. The full-time administrative assistant funds will be allocated from remaining unallocated university money in 2009.

Reallocation

There will be no reallocation of funds from existing programs.

Impact on Existing Budgets

The proposed MSN degree will not be absorbed within current base budgets. No other programs will be affected as a result of offering the proposed degree.

Appendix A: Program Curriculum

All Program Courses

Course Prefix & Number	Title	Credit Hours
Core Courses		
NURS 6000	Leadership Development	2.0
NURS 6050	Nursing Informatics	2.0
NURS 6200	Advanced Nursing Theory	2.0
NURS 6250	Advanced Nursing Research	2.0
NURS 6300	Advanced Nursing in Health Systems and Policy	2.0
	Sub-Total	10.0
Education Courses		
NURS 6400	Roles and Collaboration in Nursing Education	3.0
NURS 6500	Curriculum Design and Development	3.0
NURS 6600	Teaching/Learning I: Classroom Settings	3.0
NURS 6700	Evaluation of Learning Outcomes	2.0
NURS 6800	Teaching/Learning II: Clinical Settings	4.0
NURS 6900	Synthesis of Teaching Practice	4.0
NURS 699R	MSN Project or Thesis	2.0 - 6.0
	Sub-Total	21.0 - 25.0
	Total Number of Credits	31.0 - 35.0

New Courses to be Added in the Next Five Years

Core Courses (10.0 credits):

NURS 6000 Leadership Development (2.0)

Provides opportunities for students to examine theories of leadership and the characteristics of effective leaders. Explores the meaning of leadership within the context of nursing practice and the leadership role of the graduate level nurse. Facilitates exploration of individual leadership abilities and the development of leadership characteristics that enhance professional ability and credibility.

NURS 6050 Nursing Informatics (2.0)

Introduces nursing informatics theory, evolving practice applications and skill development. Discusses human factors essential to effective application of nursing informatics in practice. Applies technical skills and processes for the integration of nursing informatics into nursing education and clinical practice settings.

NURS 6200 Advanced Nursing Theory (2.0)

Provides students opportunities to critique and deconstruct extant and emerging theories as they relate to nursing. Explores the relationships among theory, knowledge, science and evidence based nursing practice. Facilitates the advancement of nursing practice based on theoretical principles.

NURS 6250 Advanced Nursing Research (2.0)

Prepares students to explore, critique, synthesize and utilize appropriate research findings to resolve nursing problems and improve outcomes. Incorporates various research designs in the development of nursing practice. Applies research methodology and ethical considerations in development of a research proposal for evidence based practice.

NURS 6300 Advanced Nursing in Health Systems and Policy (2.0)

Prepares students for their role in becoming change agents within the workforce. Provides students opportunity to critique current healthcare policies including the effects policies have on current nursing practice and current healthcare systems. Helps students identify changes that need to occur in order to advance nursing and healthcare in the future.

Education Courses (21.0- 25.0):**NURS 6400 Roles and Collaboration in Nursing Education (3.0)**

Prepares students to transition from the primary caregiver role to one of a knowledge worker in multiple settings. Prepares students to actualize the roles of the nurse educator as facilitators, motivators, mentors, consultants, colleagues, collaborators, scholars, members of the academy and advocates in academic and clinical settings.

NURS 6500 Curriculum Design and Development (3.0)

Explores curriculum design and development in nursing and incorporates reviewing, restructuring and developing curricula to meet identified learning needs. Enhances student skill and understanding of curricular processes designed to foster and advance nursing education.

NURS 6600 Teaching/Learning I: Classroom Settings (3.0)

Focuses on facilitating learning in classroom settings. Incorporates aspects of the philosophy of adult education and adult learning theory, the teaching/learning process and self evaluation through reflective thinking/processing. Provides active participation in the teaching/learning environment.

NURS 6700 Evaluation of Learning Outcomes (2.0)

Explores the application of various methods of evaluation, measurement and grading of learning outcomes. Applies assessment techniques to various aspects of nurse education.

NURS 6800 Teaching/Learning II: Clinical Settings (4.0)

Focuses on effective teaching skills for clinical settings. Establishes teacher-learner relationships as being different than in the didactic setting.

NURS 6900 Synthesis of Teaching Practice (4.0)

Provides opportunities for students to enact the nurse educator role in academic and/or clinical settings. Applies knowledge under the direct mentorship of academic or clinical nurse educators.

NURS 699R MSN Project or Thesis (2.0 - 6.0)

Individualized faculty supervision of MSN thesis or project research and/or planning and implementation. May be repeated as needed for completion of thesis or project but only six credits may be applied toward MSN degree requirements.

Appendix B: Program Schedule

Prefix / Number	Title	Credit Hours
Semester 1		
NURS 6000	Leadership Development	2.0
NURS 6050	Nursing Informatics	2.0
NURS 6200	Advanced Nursing Theory	2.0
NURS 6250	Advanced Nursing Research	2.0
	Sub-Total	8.0
Semester 2		
NURS 6400	Roles and Collaboration in Nursing Education	3.0
NURS 6500	Curriculum Design and Development	3.0
NURS 6600	Teaching/Learning I: Classroom Setting	3.0
	Sub-Total	9.0
Semester 3		
NURS 6300	Advanced Nursing in Health Systems and Policy	2.0
NURS 6700	Evaluation of Learning Outcomes	2.0
NURS 6800	Teaching/Learning II: Clinical Settings	4.0
	Sub-Total	8.0
Semester 4		
NURS 6900	Synthesis of Teaching Practice	4.0
NURS 699R	MSN Project or Thesis	2.0 - 6.0
	Sub-Total	6.0-10.0

Appendix C: Faculty

Master of Science in Nursing Faculty

Faculty	Degree	Year Awarded	University Awarding Degree	Emphasis
Marlene Bacon	PhD	2001	University of Utah	Health Promotion
Gaya Carlton	PhD	2007	University of Colorado Denver	Nursing Education
Hsiu-Chin Chen	PhD EdD	2004 2005	University of Utah University of South Dakota	Nursing/ Educational Administration
Joohyun Chung	PhD	2008	University of Utah	Nursing Informatics
Gretchen Cornell	PhD	1984	University of Missouri	Educational Administration
Marianne Craven	PhD(c)	2009 anticipated graduation	Indiana University	Nursing Informatics
Suzette Farmer	PhD	2004	University of Utah	Nursing
Dianne McAdams-Jones	EdD In progress	2010 anticipated graduation	College of St. Mary	Healthcare Professions
Gary Measom	PhD	1992	University of New Mexico	Exercise Physiology

Bacon, Marlene Associate Professor, UVU Department of Nursing since 2008; PhD, Nursing (emphasis on health promotion, nursing education, and leadership), University of Utah; MS, Nursing Administration, University of Utah; BSN, Westminster College, Salt Lake City, Utah. Dr. Bacon is currently serving as the Department Chair for Nursing and Assistant Dean for the College of Science and Health at Utah Valley University and is teaching the Nursing Standards and Ethics course (NURS 3410). Dr. Bacon served as Dean of Health Sciences at Salt Lake Community College from 2005-08 and as a nursing faculty member has taught nursing management, community health nursing, psychiatric nursing and pediatric nursing in undergraduate programs. She is a site evaluator for Northwest Commission for Colleges and Universities (NWCCU) and is identified as an expert in nursing leadership, service learning, outcomes assessment and health science program accreditation. Dr. Bacon was awarded a Research Fellowship from the University of Utah to support her work in adolescent suicide prevention and has received grants from the National Institute of Health in health promotion intervention research. She was awarded the Utah State Compaq Award for Service Learning (2003) and published research and presented on engaged learning. She has published and presented regionally, nationally and internationally on her work in adolescent suicide prevention, international nursing education and nursing leadership.

Carlton, Gaya Professor, UVU Department of Nursing since 1989; PhD, Nursing Education (emphasis on quality patient outcomes and safety), University of Colorado Denver; MSN, Nursing Administration, University of Utah; BSN, University of Utah. Nursing Education Certificate through University of Northern Colorado. Dr. Carlton has served as UVU Faculty Senate President, Chair of the UVU Merit Committee and RN-BSN Program Coordinator. She has taught the following undergraduate courses: Health Assessment, Nursing Research, Nursing Leadership, Senior Seminar, Senior Project (capstone), Nursing Issues, Nursing 3000 series and Concepts of Nursing II (maternal/child nursing), III (medical/surgical nursing), and IV (advanced maternal/child nursing). In addition to her UVU courses, Dr. Carlton teaches Command and General Staff College for the U.S Army Reserve where subject matter for this graduate level program includes leadership assessment and development, legal and ethical issues, army values, critical thinking/reasoning, military doctrine and theoretical concepts, campaign planning, full spectrum operations, military history, strategy and tactics, interpersonal skills, communication, and logistics and operations in joint, multinational and interagency environments. She is also a qualified Meyers-Briggs consultant. Dr. Carlton has published and presented her research concerning patient safety and discovery and prevention of medication administration errors at local and national conferences.

Chen, Hsiu-Chin Associate Professor, UVU Department of Nursing since 2004; PhD, Nursing (emphasis on leadership and job satisfaction), University of Utah; EdD, Educational Administration (emphasis on leadership, management, and college education), University of South Dakota; MSN, Medical-Surgical Nursing (emphasis on oncology), Kaohsiung Medical University in Taiwan. Dr. Chen has taught Nursing Research and Concepts of Nursing IV (community nursing) in the undergraduate program. She has published and presented research studies related to leadership, faculty job satisfaction, student satisfaction, instrument development, and nursing program evaluation in national and international research conferences. Dr. Chen has been awarded research grants from UVU and NLNAC for student satisfaction tool development and nursing program evaluation and merit grants from UVU for service learning, transcultural nursing, and study abroad. She is a reviewer for two peer-reviewed nursing journals and has been a consultant for thesis and dissertation projects.

Joohyun, Chung Assistant Professor, UVU Department of Nursing since 2008; PhD, Nursing Informatics (telehealth for older adults), University of Utah; BSN, Korea University. Nursing Genetics Certificate through University of Utah. Dr. Chung has taught the statistics lab for graduate students. Her dissertation research focused on online health information use by participants in selected senior centers in Korea (Chair: Carole A. Gassert, Committee: Dr. Ginette A. Pepper, Dr. Byron D. Bair, Dr. Patricia F. Pearce, and Dr. Scott Wright). She has published and presented her research concerning telehealth for older adults, electronic discourse in telehealth, and Electronic Health Records Systems in Utah.

Cornell, Gretchen Professor, UVU Department of Nursing since 2006; PhD, Educational Administration (minors in Adult Education, Higher Education, Statistics and Computer, Nursing), University of Missouri; Education Specialist, Educational Administration, Truman State University, Missouri; MSN, University of Illinois-Chicago, Medical-Surgical Nursing with functional area of nurse education; BS in General Science and Diploma in Nursing, Fort Hays State University. Certified as a Nurse Educator (CNE) by the National League for Nursing, 2005. Dr. Cornell has taught the undergraduate course Nursing Concepts II at UVU. She has developed the new undergraduate courses Nursing Care of the Older Adult and Standards and Ethics of Nursing. While a faculty member at Brigham Young University she developed and taught a graduate course for nursing faculty,

Outcomes Measurement. As a Commission on Collegiate Nursing Education (the accreditation branch of the American Association of Colleges of Nursing) site evaluator from 1998-2006, Dr. Cornell evaluated undergraduate and graduate programs across the nation. She has published and presented on program outcomes assessment.

Craven, Marianne Professor, UVU Department of Nursing since 1995; PhD(c), Nursing (emphasis on nursing education and nursing informatics), Indiana University; MN, University of Phoenix (management emphasis); BSN, Brigham Young University. Ms. Craven has taught the following undergraduate courses: Concepts of Nursing I (Nursing Fundamentals, and beginning Medical/Surgical Nursing), Concepts of Nursing II (Pediatric focus), Concepts of Nursing III (Medical/Surgical Nursing), Nursing Theory, Nursing Issues, Health Systems and Policy. She has served as President of Utah Nurses Association, and currently serves as President of the Utah Nurses Foundation. She has mentored a student receiving a Master's Degree in Nursing Education and has presented at local, regional, and national Nursing Education Conferences on current methodology of teaching practices. She is currently completing her PhD with a dissertation focus on developing clinical judgment in nursing students.

Farmer, Suzette Associate Professor, UVU Department of Nursing since 1995; PhD, Nursing (Dissertation: The Relationship of Emotional Intelligence to Burnout and Job Satisfaction Among Nurses in Early Nursing Practice), University of Utah; MS, Adult Physiological Nursing, University of Utah; BSN, University of Utah. Dr. Farmer has served as the Associate Chair for the Department of Nursing and Associate Dean for the School of Science and Health. She has chaired curriculum committees for the department, school, and college. She has been a faculty mentor for two graduate students from the University of Utah enrolled in the Nursing Education program and has received "Honors in Nursing" awards for her work with these students. She is a Program Evaluator of for the National League for Nursing Accrediting Commission (NLNAC) and is identified as an expert in curriculum development for this organization. She is a peer reviewer for the Journal of Nursing Education, with an expertise in curriculum development and educational strategies. Dr. Farmer was a contributor and consultant for a psychiatric nursing textbook, she also authored the instructor's manual for this text. In addition, she has been an invited peer reviewer for numerous nursing textbooks. She has taught undergraduate courses at Weber State University (WSU), the Massachusetts College of Pharmacy and Health Sciences (MCPHS), and UVU. Courses include: Health Policy, Community Health Nursing, Nursing Leadership, Nursing Research, Nursing Theory, Mental Health Nursing, Nursing Pharmacology, Introduction to Nursing, Nursing Issues, Nursing and Service Learning, Nursing Pathophysiology, First Year Seminar (College Success), and Concepts of Nursing II, III, and IV. Dr. Farmer has presented internationally on the role of emotional intelligence in nursing, she has presented nationally and published on the knowledge and attitudes of Taiwanese college students regarding human immunodeficiency virus and acquired immune deficiency syndrome (HIV/AIDS), and she has published on the long-term impact of international programs for nursing students.

McAdams-Jones, Dianne Assistant Professor, UVU Department of Nursing since 2006, Nursing faculty University of Scranton (2 years), Saint Louis Municipal School of Nursing (2 years) and Tuskegee University (3 years); Doctoral Student, Healthcare Professions, College of Saint Mary, Omaha, Nebraska; MSN, Nursing Education, Westminster College; MEd, Tuskegee University; BSN, Tuskegee, University. Nursing Education Certificate through Westminster College. Dianne has served on the NCAA Certification Self-Study Committee, Student Welfare Committee (chair) and Curriculum Committee. Undergraduate courses taught include Fundamentals in Nursing, Health Policy and

Politics and Introduction to Nursing. She has also taught Advanced Medicine and Surgery and Pediatric Nursing at Westminster College as a graduate fellow, Advanced Medicine and Surgery at University of Scranton and Fundamentals in Nursing at Tuskegee University. She received a research fellowship from UVU where she is currently conducting research on using music as pedagogy in the learning process. Dianne comes to UVU with 36 years of varied nursing experience which spans several states and Europe. She is a Major, U.S. Army Reserve, Army Nurse Corps and served active duty for eight years. Her primary specialty is intensive care nursing where she served as Nurse Manager and Nurse Educator in several military and civilian hospitals. Dianne has received several grants in the promotion of health teaching and purchasing of equipment/simulators for UVU. She is published on current health issues as well as nursing and social issues.

Measom, Gary J. Associate Professor, UVU Department of Nursing since 2000; PhD, Health, Physical Education, Recreation (Exercise Physiology), University of New Mexico, Albuquerque New Mexico; MSN Cardiovascular Nursing, Brigham Young University; BSN, Brigham Young University; CCRN, APRN; Chair, Department of Nursing. Dr. Measom has taught the following courses at UVU: Introduction to Nursing, Concepts of Nursing I, II, and III, Pharmacology, Associate Degree Seminar, Nursing Research. He taught the following nursing classes at Brigham Young University: Fundamentals of Nursing, Beginning and advanced Medical/Surgical Nursing, Physical Assessment and Graduate Pathophysiology. He taught Orthopedic Nursing and Physical Assessment at the University of New Mexico. Dr. Measom is a site visitor for the NLNAC. He has published on the effects of hot and cold on body tissues, and presented at a local and national level about high-fidelity simulation in nursing education.

Appendix D: References

- Department of Workforce Services. (2007, May). *Utah occupational report for registered nurses*. Retrieved May 17, 2008, from <http://jobs.utah.gov/jsp/wi/utalmis/oifullfriendly.do>
- Department of Workforce Services. (2007, May). *Utah occupational report for nursing instructors and teachers, postsecondary*. Retrieved May 17, 2008, from <http://jobs.utah.gov/jsp/wi/utalmis/oifullfriendly.do>
- Health Resources and Services Administration. (2007, September 27). *Projected number of and demand for licensed registered nurses, 2000-2020*. Retrieved May 17, 2008, from <http://bhpr.hrsa.gov/nursing>
- Health Resources and Services Administration. (2006). *The registered nurse population: Findings from the 2004 national sample nurses*. Retrieved June 5, 2008, from <http://bhpr.hrsa.gov/healthworkforce/msurvey04>
- Institute of Medicine (2004). *Keeping patients safe: Transforming the work environment of nurses*. Washington, D.C.: The National Academies Press.
- National League for Nursing. (2002, May 18). *Position statement: The preparation of nurse educators*. Retrieved May 17, 2008, from <http://www.nln.org/aboutnln/PositionStatement/prepofnursed02.htm>
- National League for Nursing. (2005, August). *Nurse faculty shortage fact sheet*. Retrieved May 17, 2008, from <http://www.nln.org/governmentaffairs/pdf/NurseFacultyShortage.pdf>
- Robert Wood Johnson Foundation. (2008). *Strategically leading the new center to champion nursing in America*. Retrieved June 5, 2008, from <http://www.rwjf.org/pr/product.jsp?is=24591>

January 7, 2009

MEMORANDUM

TO: State Board of Regents

FROM: William A. Sederburg

SUBJECT: Consent Calendar: Academic, Career and Technical Education and Student Success (Programs) Committee

The following Fast Track items have been submitted by Salt Lake Community College (SLCC) for consideration by the Regents on the Consent Calendar of the Programs Committee.

- i. *New Certificate of Completion: Commercial Fixed-Wing Aviation Flight Technology*

Request

Salt Lake Community College (SLCC) requests approval to offer a Certificate of Completion (COC) in Commercial Fixed-Wing Aviation Flight Technology effective Winter 2009. This program has been approved by the institutional Board of Trustees on 13 June 2008.

Program Description

The Certificate of Completion will provide students with the basic knowledge and skills needed to operate aircraft for commercial operations in the United States. The program combines flight training with technical and professional courses essential for success to include flight training leading to FAA rating and endorsements; Commercial Pilot; CFI; CFI/Instrument; aviation industry operations, and human factors in the flight environment. COC requirements may be applied toward entry-level requirements for the Professional Pilot program or toward commercial rating.

Program Courses: The COC in Non-Commercial Fixed-Wing Aviation Flight Technology is utilizing existing courses from the Professional Pilot program. The COC in Commercial Fixed-Wing Aviation Flight Technology is designed to prepare students to enter the career field. Requirements are consistent with Regent and institutional guidelines for a COC. Students will earn a minimum of 37 credit hours which include the Northwest Accreditation required components of General Education for human relations, communication, and computation.

No new courses are anticipated in the next five years. Courses included in the COC are existing courses in the Professional Pilot program that are being organized to offer this COC, thus providing students additional opportunities preliminary to completing an associate degree.

Course Prefix & Number	Title	Credit Hours
General Education	Sub-Total	8-11
PILT 1010	Air Transportation	3
PILT 1250	Instrument Ground School	3
PILT 1260	Inst Simulator Fixed-Wing Lab	1
PILT 1300	Inst Cert Fixed-Wing Lab	3
PILT 1310	Human Factors and Safety	3
PILT 2050	Aviation Meteorology	3
PILT 2100	Commercial Ground	3
PILT 2200	Comm Pilt Cert Fixed-Wing Lab	2
PILT 2240	Comm Pilt Cert Fixed-Wing Lab II	2
PILT 2300	CFI/Airplane Lab	2
PILT 2340	CFI Ground School	3
PILT 2350	CFI/Instrument Fixed-Wing Lab	1
	Sub-Total	29
	Total Number of Credits	37-40

Expected outcomes for successful students completing this certificate program are the ability to:

1. Earn FAA certificates and endorsements in Instrument, Commercial Pilot, CFI, and CFI/Instrument.
2. Identify human factors related to aviation safety.
3. Identify and properly utilize meteorological information.

Faculty: Two full-time faculty and five adjunct faculty members currently teach in the Aviation Technology Department. Prior to hiring new faculty, professional credentialing will be verified and ongoing maintenance of such credentialing will be mandated. The College's grass-roots budgeting process will be followed for any request for additional faculty. On-going professional development will be encouraged and expected, including participation in at least one national meeting per year by the lead faculty member to keep the department current within the profession. Each full-time and adjunct faculty member will teach the curriculum in which they are most proficient to optimize benefit of their professional expertise to students.

Number of faculty with Doctoral degrees	Tenure	1	Contract		Adjunct	
Number of faculty with Master's degrees	Tenure	1	Contract		Adjunct	
Number of faculty with Bachelor's degrees	Tenure	1	Contract		Adjunct	
Other Faculty	Tenure		Contract		Adjunct	3

Students will evaluate all Aviation faculty members using the applicable SLCC assessment tool. The evaluation will examine teaching practices from the student perspective and highlight areas of strengths as well as areas in need of improvement. SLCC administrators and the College training office will work with any faculty in need of assistance.

Staff: The Division of Aviation and Related Technologies in the School of Apprenticeship, Aviation, and Technical Specialties will administer this program. The Division Chair, the Chair's Administrative Assistant, and Faculty Support Services will assist in support operations. It is anticipated that no additional administrative or secretarial/clerical help will be required.

Library and Information Resources: The existing Professional Pilot program resources will fully support this COC. Resources include books, videos, DVDs and other media, subscriptions, microfiche, PowerPoint, flight and maintenance manuals, component mock-ups, flight simulators, charts, graphs, etc.

Admission Requirements: Admission is consistent with general SLCC admission procedures and guidelines; no special admission requirements exist with the exception of the following FAA requirements:

1. Student must pass FAA Second Class medical examination.
2. Student must meet the minimum age requirement of 18 years for Commercial/CFI licensing.
3. Student must be able to read, speak, write and understand the English language.

Student Advisement: Students will have the opportunity to consult with both academic and financial aid advisors. Students will also be encouraged to consult with Aviation faculty members for additional advising needs throughout their program.

External Review and Accreditation: The COC in Non-Commercial Fixed-Wing Flight Technology is composed of existing courses in the Professional Pilot program. Therefore, the courses have all been approved through the SLCC Curriculum process and have the support of the current Program Advisory Committee (PAC.) The PAC meets twice a year and will there evaluate the success of the proposed program, including the efficiency of the competencies defined, recommend appropriate changes based on assessment data, and help identify other advocates for the program. The proposed COC is validated by the FAA Code of Federal Regulations (CFR) Part 141 under the Professional Pilot program. There are no costs associated with this FAA requirement.

The SLCC Aviation Program Advisory Committee is composed of the following members: Kelvin Hyatt (SkyWest), Chair; Douglas Compton (Delta Airlines); Casey Knowlton (UT National Air Guard); Greg Naylor (Delta Airlines); James Pyles (FAA); Dan Sutliff (Million Air); Chris Tuckfield (United Airlines, Captain); Jason Judy (SL Int'l Airport ATC); Richard Blair (Corp. Pilot/Fog Operations, Owner); and Joe Wilkerson (NET JET Captain).

Need

The commercial air transportation industry continues to serve as a critical engine of the economy, both in the Intermountain Region as well as on the national level, directly supporting a vast interdependent network of large, medium and small businesses which collectively define modern, high-speed, borderless commerce. The collective air transportation industry, however, faces a significant future challenge in its ability to continue to effectively meet regional, national and global commerce demands as a pilot workforce comprised in large measure of Vietnam-era pilots is poised for a significant exodus due to age-associated retirement factors. The proposed COC can serve to effectively fill this critical technical skills void.

Market Demand: The U.S. Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook 2008-2009 projects 13 percent employment growth in this industry from 2006-2016. Population growth and an expanding global market are expected to boost the demand for air travel, contributing to job growth. New jobs will be created as the industry expands its capacity to meet this rising demand by increasing the number of aircraft in operation. However, employment growth will be limited by productivity improvements as airlines switch to larger planes and adopt the low-cost carrier model that emphasizes faster turnaround times for flights, keeping more pilots in the air rather than waiting on the ground. Job opportunities are expected to continue to be better with the regional airlines and low-cost carriers, which are growing faster than the major airlines. Opportunities with air cargo carriers also should arise because of increasing security requirements, growth in electronic commerce, and increased demand for global freight. Due to security and international practices, double-digit growth is expected for business, corporate, and on-demand air taxi travel. In the long run, demand for air travel is expected to grow along with the population and the economy. In the short run, however, employment opportunities of pilots generally are sensitive to

cyclical swings in the economy. During recessions, when a decline in the demand for air travel forces airlines to curtail the number of flights, airlines may temporarily furlough some pilots.

Student Demand: The COC in Commercial Fixed-Wing Aviation Flight Technology will give students the option to fast-track their FAA certification and rating to meet FAA requirements. This track may then be used as a stepping-stone for students to go from a certificate to a two-year degree in Professional Pilot at a pace they can financially afford. This will reduce the drop-out rate and increase the number of students finishing their education in this area of study. SLCC has seen an increase in inquiries from post-secondary, out-of-state, and international prospects seeking careers in the aviation industry.

Year	Projected Student Headcount	# of Faculty	Student-to-Faculty Ratio	Accreditation Req'd Ratio
1	26	2	13-1	NA
2	29	2	14-1	NA
3	32	2	16-1	NA
4	35	2	17-1	NA
5	39	3	13-1	NA

Similar Programs: There are no similar programs in the Utah System of Higher Education. In addition, no Part 141 certified commercial certificates or associate degrees are offered in the State of Utah.

Consistency with Institutional Mission: SLCC's role and mission as a comprehensive community college encompasses offering programs that provide students opportunities to acquire knowledge and critical thinking skills, develop self-confidence, and experience personal growth, as well as career and technical education, and workforce training to prepare individuals for career opportunities. The COC in Commercial Fixed-Wing Aviation Flight Technology will provide students with such opportunities.

Program and Student Assessment

Goals for the program and measurements of success will be:

1. Enroll a minimum of 26 new students the first year with a projected 10 percent increase annually thereafter. (Note: The enrollment projections represent a total for Commercial students combining both Fixed-Wing and Rotor-Wing students.)
2. Graduate 12 students each year.
3. 90 percent passing rate of graduates taking FAA certificate and endorsement examinations.
4. Increase the number of students achieving an AS degree through the Professional Pilot program.

Graduating students will have achieved the following competencies.

1. Accurately use navigation systems by maintaining position awareness at all times.
2. Accurately/safely plan cross-country flights using pilot age, dead reckoning, and navigation systems.
3. Analyze and perform all maneuvers from the right seat.
4. Conduct flight according to lesson plan including pre- and post-flight instructions.
5. Conduct simulated instrument cross-country flight.
6. Demonstrate instrument flying procedures.
7. Demonstrate precise airplane altitude control by instrument reference only including full and partial panel reference.
8. Demonstrate proper CRM procedures.
9. Demonstrate radio communication procedures.
10. Exhibit positive exchange of aircraft control procedures.
11. Explain how government agencies and regulations affect air transportation in commercial aviation.
12. Explain how meteorological data is gathered and used.
13. Explain how physiological, psychological and external factors relate to aviation safety including disorientation, vertigo, visual illusions and cockpit resource management.
14. Explain VFR and IFR procedures.
15. Identify meteorological services available to aviation professionals.

16. Meet FAA FAR Part 61 and 141 requirements and pass the in-class commercial pilot airmen knowledge exam with 80 percent minimum passing score.
17. Meet FAA FAR Part 61 and 141 requirements and pass the in-class fundamentals of instruction and flight instructor (airplane) airmen knowledge exam with 80 percent minimum passing score.
18. Meet FAA FAR Part 61 and 141 requirements and pass the instrument rating airmen knowledge exam with 80 percent minimum passing score.
19. Obtain pre-flight and in-flight weather information.
20. Perform at the skill level of an instrument flight instructor.
21. Prepare lesson plans for flights.
22. Read weather reports.
23. Safely operate as pilot in command.
24. Safely operate during extended cross-country flights.
25. Safely operate in the night environment.
26. Teach, describe, recognize, analyze and correct common simulated errors.

One measure of student learning will be student interest and satisfaction in reaching course objectives for each course as it is offered. One formative evaluation procedure will consist of utilizing the appropriate SLCC assessment system (IAS.) This process will evaluate student perceptions on the value of each course as they proceed toward their goal of a COC. The system assesses student viewpoints in the following areas: course content, instructor competency, understanding of major course content/principles, and the overall course. Further, a formative evaluation will occur with final examinations in each course. These exams will be constructed to focus on measuring the students' understanding of the competencies identified above. Summative evaluation will occur as students are individually assessed in preparation for the FAA certification and rating examinations. Aviation faculty will work jointly with flight instructor to assess both breadth and depth of student competencies, attitudes and skills.

Finance

The proposed COC carries no additional financial impact to the existing budget structures within the Aviation Department. This is a repackaging of existing courses to provide students another option for degree completion and thus has no budget implications.

- ii. *New Certificate of Completion: Commercial Rotor-Wing Aviation Flight Technology*

Request

Salt Lake Community College (SLCC) requests approval to offer a Certificate of Completion (COC) in Commercial Rotor-Wing Aviation Flight Technology effective Winter 2009. This program has been approved by the institutional Board of Trustees on 13 June 2008.

Program Description

The Certificate of Completion will provide students with the basic knowledge and skills needed to operate aircraft for commercial operations in the United States. The program combines flight training with technical and professional courses essential for success to include flight training leading to FAA rating and endorsements; Commercial Pilot; CFI; CFI/Instrument; aviation industry operations; and human factors in the flight environment. COC requirements may be applied toward entry-level requirements for the Professional Pilot program or toward commercial rating.

All Program Courses: The COC in Commercial Rotor-Wing Aviation Flight Technology is utilizing existing courses from the Professional Pilot program. The COC in Commercial Rotor-Wing Aviation Flight

Technology is designed to prepare students to enter the career field. Requirements are consistent with Regent and institutional guidelines for a COC. Students will earn a minimum of 39 credit hours which include the Northwest Accreditation required components of General Education for human relations, communication, and computation.

No new courses are anticipated in the next five years. Courses included in the COC are existing courses in the Professional Pilot program that are being organized to offer this COC, thus providing students additional opportunities preliminary to completing an associate degree.

Course Prefix & Number	Title	Credit Hours
General Education	Sub-Total	8-11
PILT 1010	Air Transportation	3
PILT 1250	Instrument Ground School	3
PILT 1265	Inst Simulator Rotor-Wing Lab	1
PILT 1305	Inst Cert Rotor-Wing Lab	3
PILT 1310	Human Factors and Safety	3
PILT 1315	Inst Cert Rotor-Wing Lab II	2
PILT 2050	Aviation Meteorology	3
PILT 2100	Commercial Ground	3
PILT 2205	Comm Pilt Cert Rotor-Wing Lab	2
PILT 2245	Comm Pilt Cert Rotor-Wing Lab II	2
PILT 2305	CFI/Airplane Lab	2
PILT 2340	CFI Ground School	3
PILT 2355	CFI/Instrument Rotor-Wing Lab	1
PILT 2405	Turbine Engine Rotor-Wing Lab	1
PILT 2455	Utility Operations Rotor-Wing Lab	1
	Sub-Total	31
	Total Number of Credits	39-42

Expected outcomes for successful students completing this certificate program are the ability to:

1. Earn FAA certificates and endorsements in Instrument, Commercial Pilot, CFI, CFI/Instrument, utility operations, and turbine engine.
2. Identify human factors related to aviation safety.
3. Identify and properly utilize meteorological information.

Faculty: Two full-time faculty and five adjunct faculty members currently teach in the Aviation Technology Department. Prior to hiring new faculty, professional credentialing will be verified and ongoing maintenance of such credentialing will be mandated. The College's grass-roots budgeting process will be followed for any request for additional faculty. On-going professional development will be encouraged and expected, including participation in at least one national meeting per year by the lead faculty member to keep the department current within the profession. Each full-time and adjunct faculty member will teach the curriculum in which they are most proficient to optimize benefit of their professional expertise to students.

Number of faculty with Doctoral degrees	Tenure	1	Contract	Adjunct	
Number of faculty with Master's degrees	Tenure	1	Contract	Adjunct	
Number of faculty with Bachelor's degrees	Tenure	1	Contract	Adjunct	
Other Faculty	Tenure		Contract	Adjunct	3

Students will evaluate all Aviation faculty members using the applicable SLCC assessment tool. The evaluation will examine teaching practices from the student perspective and highlight areas of strengths as well as areas in need of improvement. SLCC administrators and the College training office will work with any faculty in need of assistance.

Staff: The Division of Aviation and Related Technologies in the School of Apprenticeship, Aviation, and Technical Specialties will administer this program. The Division Chair, the Chair's Administrative Assistant, and Faculty Support Services will assist in support operations. It is anticipated that no additional administrative or secretarial/clerical help will be required.

Library and Information Resources: The existing Professional Pilot program resources will fully support this COC. Resources include books, videos, DVDs and other media, subscriptions, microfiche, PowerPoint, flight and maintenance manuals, component mock-ups, flight simulators, charts, graphs, etc.

Admission Requirements: Admission is consistent with general SLCC admission procedures and guidelines; no special admission requirements exist with the exception of the following FAA requirements:

1. Student must pass FAA Second Class medical examination.
2. Student must meet the minimum age requirement of 18 years for Commercial/CFI licensing.
3. Student must be able to read, speak, write and understand the English language.

Student Advisement: Students will have the opportunity to consult with both academic and financial aid advisors. Students will also be encouraged to consult with Aviation faculty members for additional advising needs throughout their program.

External Review and Accreditation: The COC in Commercial Rotor-Wing Flight Technology is composed of existing courses in the Professional Pilot program. Therefore, the courses have all been approved through the SLCC Curriculum process and have the support of the current Program Advisory Committee (PAC.) The PAC meets twice a year and will there evaluate the success of the proposed program, including the efficiency of the competencies defined, recommend appropriate changes based on assessment data, and help identify other advocates for the program. The proposed COC is validated by the FAA Code of Federal Regulations (CRF) Part 141 under the Professional Pilot program. There are no costs associated with this FAA requirement.

The SLCC Aviation Program Advisory Committee is composed of the following members: Kelvin Hyatt (SkyWest), Chair; Douglas Compton (Delta Airlines); Casey Knowlton (UT National Air Guard); Greg Naylor (Delta Airlines); James Pyles (FAA); Dan Sutliff (Million Air); Chris Tuckfield (United Airlines, Captain); Jason Judy (SL Int'l Airport ATC); Richard Blair (Corp. Pilot/Fog Operations, Owner); and Joe Wilkerson (NET JET Captain).

Need

The commercial air transportation industry continues to serve as a critical engine of the economy, both in the Intermountain Region as well as on the national level, directly supporting a vast interdependent network of large, medium and small businesses which collectively define modern, high-speed, borderless commerce. The collective air transportation industry, however, faces a significant future challenge in its ability to continue to effectively meet regional, national and global commerce demands as a pilot workforce comprised in large measure of Vietnam-era pilots is poised for a significant exodus due to age-associated retirement factors. The proposed COC can serve to effectively fill this critical technical skills void.

Market Demand: The rotor-wing (helicopter) industry consists of jobs in agriculture, logging, utilities, law enforcement, oil and gas exploration, construction, air medical and safety, electronic news gathering, and personal transportation for corporate charter and tour operations.

Employment of helicopter pilots is projected to grow 15 percent or about as fast as the average for all occupations. Population growth and an expanding global demand for oil exploration in wilderness areas and the Gulf Coast regions, and construction in large metropolitan areas has expanded the market for well-trained helicopter pilots. The average age of a helicopter pilot is 52 years old and over the next 8 to 10 years, the majority of experienced helicopter pilots will retire. This will further increase the demand for well-trained commercial helicopter pilots.

New jobs will be created as the industry expands its capacity to meet sustainability demands in the areas of utility work, logging, fire patrol, geo seismic research and point-to-point personal transportation. Employment growth will also be impacted by military demand of shipping freight, sending personnel into hostile areas around the world, the aging population in rural America demanding medical transportation, faster response demanded by the public in natural disaster and emergency rescue situations, and in "as events unfold" electronic news gathering.

Student Demand: The COC in Commercial Rotor-Wing Aviation Flight Technology will give students the option to fast-track their FAA certification and rating to meet FAA requirements. This track may then be used as a stepping-stone for students to go from a COC to a two-year degree in Professional Pilot at a pace they can financially afford. This will reduce the drop-out rate and increase the number of students finishing their education in this area of study. SLCC has seen an increase in inquiries from post-secondary, out-of-state, and international prospective students seeking careers in the aviation industry.

Year	Projected Student Headcount	# of Faculty	Student-to-Faculty Ratio	Accreditation Req'd Ratio
1	26	2	13-1	NA
2	29	2	14-1	NA
3	32	2	16-1	NA
4	35	2	17-1	NA
5	39	3	13-1	NA

Similar Programs: There are no similar programs in the Utah System of Higher Education. In addition, no Part 141 certified commercial certificates or associate degrees are offered in the State of Utah.

Consistency with Institutional Mission: SLCC's role and mission as a comprehensive community college encompasses offering programs that provide students opportunities to acquire knowledge and critical thinking skills, develop self-confidence, and experience personal growth, as well as career and technical education, and workforce training to prepare individuals for career opportunities. The COC in Commercial Rotor-Wing Aviation Flight Technology will provide students with such opportunities.

Program and Student Assessment

Goals for the program and measurements of success will be:

1. Enroll a minimum of 26 new students the first year with a projected 10 percent increase annually thereafter. (Note: The enrollment projections represent a total for Commercial students combining both Fixed-Wing and Rotor-Wing students.)
2. Graduate 12 students each year.
3. 90 percent passing rate of graduates taking FAA certificate and endorsement examinations.

4. Increase the number of students achieving an AS degree through the Professional Pilot program.

Graduating students will have achieved the following competencies:

1. Accurately/safely plan cross-country flights using instrument navigation systems.
2. Analyze and perform maneuvers from the left seat.
3. Conduct flight according to lesson plan including pre-and post-flight.
4. Conduct flight operations according to lesson plan including pre- and post-flight unique to turbine powered rotorcraft.
5. Conduct simulated instrument cross-country flight.
6. Demonstrate Instrument flying procedures.
7. Demonstrate proficiency level of an instrument-rated pilot.
8. Demonstrate proper CRM procedures.
9. Demonstrate radio communication procedures.
10. Demonstrate sound aeronautical decision making (ADM) skills.
11. Determine position in relation to the VOR stations.
12. Explain how government agencies and regulations affect air transportation in commercial aviation.
13. Explain how meteorological data is gathered and used.
14. Explain NDB and GPS navigation.
15. Explain VFR and IFR procedures.
16. Identify meteorological services available to aviation professionals.
17. Intercept and track radials.
18. Maneuver and operate turbine-engine rotorcraft.
19. Meet FAA FAR Part 61 and 141 requirements and pass the in-class fundamentals of instruction and flight instructor (airplane) airmen knowledge exam with 80 percent minimum passing score.
20. Meet FAA FAR Part 61 and 141 requirements and pass the in-class instrument rating airmen knowledge exam with 80 percent minimum passing score.
21. Obtain pre-flight and in-flight weather information.
22. Operate a rotorcraft in specialized areas including practical applications with external loads at on and off airport locations.
23. Operate instruments safely in the night environment.
24. Perform accurate instrument approach procedures including missed approaches.
25. Perform at the commercial pilot skill level.
26. Perform at the instrument pilot skill level while giving effective instruction.
27. Perform IFR flight operations including cross-country.
28. Perform specified maneuvers within a pre-determined altitude, airspeed and heading.
29. Prepare lesson plans for flights.
30. Read weather reports.
31. Safely operate as pilot in command.
32. Track VOR time, speed, distance computations and DME acres.

One measure of student learning will be student interest and satisfaction in reaching course objectives for each course as it is offered. One formative evaluation procedure will consist of utilizing the appropriate SLCC assessment system (IAS.) This process will evaluate student perceptions on the value of each course as they proceed toward their goal of a COC. The system assesses student viewpoints in the following areas: course content, instructor competency, understanding of major course content/principles, and the overall course. Further, a formative evaluation will occur with final examinations in each course. These exams will be constructed to focus on measuring the students' understanding of the competencies identified above. Summative evaluation will occur as students are individually assessed in preparation for the FAA certification and rating examinations. Aviation faculty will work jointly with flight instructor to assess both breadth and depth of student competencies, attitudes and skills.

Finance

The proposed COC carries no additional financial impact to the existing budget structures within the Aviation Department. This is a repackaging of existing courses to provide students another option for degree completion and thus has no budget implications.

iii. *New Certificate of Completion: Non-Commercial Fixed-Wing Aviation Flight Technology*

Request

Salt Lake Community College (SLCC) requests approval to offer a Certificate of Completion (COC) in Non-Commercial Fixed-Wing Aviation Flight Technology effective Winter 2009. This program has been approved by the institutional Board of Trustees on 13 June 2008.

Program Description

The Certificate of Completion will provide students with the basic knowledge and skills needed to operate aircraft for pleasure (non-commercial) in the Western United States. The program combines flight training with technical and professional courses essential for success to include flight training leading to FAA rating; Private Pilot Certificate; FAA Instrument Certificate; aircraft systems operations; effects of weather on flight; and flying in mountainous regions. COC requirements may be applied toward entry-level requirements for the Professional Pilot program or toward commercial rating.

Program Courses: The COC in Non-Commercial Fixed-Wing Aviation Flight Technology will provide students with the opportunity to obtain their FAA rating and certificates which will enable them to safely operate fixed-wing aircraft in the Intermountain Region for personal use and/or pleasure. Requirements are consistent with Regent and institutional guidelines for a COC. Students will earn a minimum of 32 credit hours which include the Northwest Accreditation required components of General Education for human relations, communication, and computation.

No new courses are anticipated in the next five years. Courses included in the COC are existing courses in the Professional Pilot program that are being organized to offer this COC, thus providing students additional opportunities preliminary to completing an associate degree. Existing administrative structures will support this program.

Course Prefix & Number	Title	Credit Hours
General Education	Sub-Total	8-11
PILT 1040	Aviation Orientation	1
PILT 1100	Private Pilot Ground School	4
PILT 1140	Solo Pilot Certificate Lab	1
PILT 1150	Private Pilot Fixed-Wing Cert Lab	2
PILT 1250	Instrument Ground School	3
PILT 1260	Inst Simulator Fixed-Wing Lab	1
PILT 1300	Inst Cert Fixed-Wing Lab	3
PILT 1400	Intro to ATC	3
PILT 2050	Aviation Meteorology	3
PILT 2420	Aircraft Systems	2
PILT 2440	Mountain Flying Fixed-Wing Lab	1
	Sub-Total	24
	Total Number of Credits	32-35

Expected outcomes for successful students completing this certificate program are the ability to:

1. Earn FAA Private Pilot license.
2. Earn FAA Instrument Rating license.
3. Safely operate a light, general aviation aircraft around mountainous territory.
4. Understand and effectively operate in the Air Traffic Control system.

Faculty: Two full-time faculty and five adjunct faculty members currently teach in the Aviation Technology Department. Prior to hiring new faculty, professional credentialing will be verified and ongoing maintenance of such credentialing will be mandated. The College's grass-roots budgeting process will be followed for any request for additional faculty. On-going professional development will be encouraged and expected, including participation in at least one national meeting per year by the lead faculty member to keep the department current within the profession. Each full-time and adjunct faculty member will teach the curriculum in which they are most proficient to optimize benefit of their professional expertise to students.

Number of faculty with Doctoral degrees	Tenure	1	Contract	Adjunct	
Number of faculty with Master's degrees	Tenure	1	Contract	Adjunct	
Number of faculty with Bachelor's degrees	Tenure	1	Contract	Adjunct	
Other Faculty	Tenure		Contract	Adjunct	3

Students will evaluate all Aviation faculty members using the applicable SLCC assessment tool. The evaluation will examine teaching practices from the student perspective and highlight areas of strengths as well as areas in need of improvement. SLCC administrators and the College training office will work with any faculty in need of assistance.

Staff: The Division of Aviation and Related Technologies in the School of Apprenticeship, Aviation, and Technical Specialties will administer this program. The Division Chair, the Chair's Administrative Assistant, and Faculty Support Services will assist in support operations. It is anticipated that no additional administrative or secretarial/clerical help will be required.

Library and Information Resources: The existing Professional Pilot program resources will fully support this COC. Resources include books, videos, DVDs and other media, subscriptions, microfiche, PowerPoint, flight and maintenance manuals, component mock-ups, flight simulators, charts, graphs, etc.

Admission Requirements: Admission is consistent with general SLCC admission procedures and guidelines; no special admission requirements exist with the exception of the following FAA requirements:

1. Student must pass FAA Second Class medical examination.
2. Student must meet the minimum age requirement of 17 years for Private/Instrument licensing (16 years old to solo.)
3. Student must be able to read, speak, write and understand the English language.

Student Advisement: Students will have the opportunity to consult with both academic and financial aid advisors. Students will also be encouraged to consult with Aviation faculty members for additional advising needs throughout their program.

External Review and Accreditation: The COC in Non-Commercial Fixed-Wing Flight Technology is composed of existing courses in the Professional Pilot program. Therefore, the courses have all been

approved through the SLCC Curriculum process and have the support of the current Program Advisory Committee (PAC.) The PAC meets twice a year and will there evaluate the success of the proposed program, including the efficiency of the competencies defined, recommend appropriate changes based on assessment data, and help identify other advocates for the program. The proposed COC is validated by the FAA Code of Federal Regulations (CRF) Part 141 under the Professional Pilot program. There are no costs associated with this FAA requirement.

The SLCC Aviation Program Advisory Committee is composed of the following members: Kelvin Hyatt (SkyWest), Chair; Douglas Compton (Delta Airlines); Casey Knowlton (UT National Air Guard); Greg Naylor (Delta Airlines); James Pyles (FAA); Dan Sutliff (Million Air); Chris Tuckfield (United Airlines, Captain); Jason Judy (SL Int'l Airport ATC); Richard Blair (Corp. Pilot/Fog Operations, Owner); and Joe Wilkerson (NET JET Captain).

Need

The proposed COC supports the goals of the USHE Master plan with regard to Applied Technology Education and provides students the opportunity to obtain their FAA licenses and ratings.

Market Demand: This COC will lead students to FAA rating and certificates which will enable them to safely operate fixed-wing aircraft in the Intermountain Region for personal use and/or pleasure. Though the Non-Commercial Fixed-Wing Aviation Flight Technology COC is for personal development, it does provide the requisite foundation from which to expeditiously pursue high demand positions in the industry and expand educational attainment as students are able and desire to proceed further in their training.

Student Demand: The COC in Non-Commercial Fixed-Wing Aviation Flight Technology will give students the option to fast-track their FAA certification and rating to meet FAA requirements in the areas of private pilot, instrument and mountain flying. This track may then be used as a stepping-stone for students to go from a COC to a two-year degree in Professional Pilot at a pace they can financially afford. This will reduce the drop-out rate and increase the number of students finishing their education in this area of study.

Year	Projected Student Headcount	# of Faculty	Student-to-Faculty Ratio	Accreditation Req'd Ratio
1	26	2	13-1	NA
2	29	2	14-1	NA
3	32	2	16-1	NA
4	35	2	17-1	NA
5	39	3	13-1	NA

Similar Programs: There are no similar programs in the Utah System of Higher Education. In addition, no Part 141 certified commercial certificates or associate degrees are offered in the State of Utah.

Program and Student Assessment

Goals for the program and measurements of success will be:

1. Enroll a minimum of 26 new students the first year with a projected 10 percent increase annually thereafter. (Note: The enrollment projections represent a total for Non-Commercial students, combining both Fixed-Wing and Rotor-Wing students.)
2. Graduate 12 students each year.
3. 90 percent passing rate of graduates taking FAA certificate and endorsement examinations.
4. Increase the number of students achieving an AS degree through the Professional Pilot program.

Graduating students will have achieved the following competencies:

1. Accurately use navigation systems by maintaining position awareness at all times.
2. Complete stage I check flight with a check instructor as outlined in the current FAA Private Pilot Practical Test Standards.
3. Complete stage II check flight with a check instructor as outlined in the current FAA Private Pilot Practical Test Standards.
4. Conduct simulated instrument cross-country flight.
5. Demonstrate instrument flying procedures.
6. Demonstrate precise airplane altitude control by instrument reference only including full and partial panel reference.
7. Demonstrate radio communication procedures
8. Explain how meteorological data is gathered and used.
9. Explain special use of airspace and different classifications of airspace.
10. Explain the operation of general aircraft systems and how they relate to flight.
11. Explain the relationship between tower, TRACON and center.
12. Fly a light general aviation aircraft over, in, and around mountainous territory.
13. Identify basic ATC phraseology including ICAO alphabet and the proper order of clearance.
14. Identify meteorological services available to aviation professionals.
15. Interpret LOA's and SOP's.
16. Meet FAA FAR Part 61 and 141 requirements and pass the in-class private pilot airmen knowledge exam with 80 percent minimum passing score.
17. Obtain pre-flight and in-flight weather information.
18. Proficiently take-off and land an aircraft at airports in mountainous territory.
19. Read weather reports.
20. Recall basic rules of non-radar and radar separation.

One measure of student learning will be student interest and satisfaction in reaching course objectives for each course as it is offered. One formative evaluation procedure will consist of utilizing the appropriate SLCC assessment system (IAS.) This process will evaluate student perceptions on the value of each course as they proceed toward their goal of a COC. The system assesses student viewpoints in the following areas: course content, instructor competency, understanding of major course content/principles, and the overall course. Further, a formative evaluation will occur with final examinations in each course. These exams will be constructed to focus on measuring the students' understanding of the competencies identified above. Summative evaluation will occur as students are individually assessed in preparation for the FAA certification and rating examinations. Aviation faculty will work jointly with flight instructor to assess both breadth and depth of student competencies, attitudes and skills.

Finance

The proposed COC carries no additional financial impact to the existing budget structures within the Aviation Department. This is a repackaging of existing courses to provide students another option for degree completion and thus has no budget implications.

iv. *New Certificate of Completion: Non-Commercial Rotor Wing Aviation Flight Technology*

The Request

Salt Lake Community College (SLCC) requests approval to offer a Certificate of Completion (COC) in Non-Commercial Rotor-Wing Aviation Flight Technology effective Winter 2009. This program has been approved by the institutional Board of Trustees on 13 June 2008.

Program Description

The Certificate of Completion in Non-Commercial Rotor-Wing Aviation Flight Technology will provide students with the basic knowledge and skills needed to operate aircraft for pleasure (non-commercial) in

the Western United States. The program combines flight training with technical and professional courses essential for success to include flight training leading to FAA rating; Private Pilot Certificate; FAA Instrument Certificate; aircraft systems operations; effects of weather on flight; and flying in mountainous regions. COC requirements may be applied toward entry-level requirements for the Professional Pilot program or toward commercial rating.

Program Courses: The COC in Non-Commercial Rotor-Wing Aviation Flight Technology is utilizing existing courses from the Professional Pilot program. This COC is designed to prepare students to obtain their FAA rating and certificates which will enable them to safely operate fixed-wing aircraft in the Intermountain Region for personal use and/or pleasure. Requirements are consistent with Regent and institutional guidelines for a COC. Students will earn a minimum of 32 credit hours which include the Northwest Accreditation required components of General Education for human relations, communication, and computation.

No new courses are anticipated in the next five years. Courses included in the COC are existing courses in the Professional Pilot program that are being organized to offer this COC thus providing students additional opportunities preliminary to completing an associate degree.

Course Prefix & Number	Title	Credit Hours
General Education	Sub-Total	8-11
PILT 1040	Aviation Orientation	1
PILT 1100	Private Pilot Ground School	4
PILT 1145	Solo Pilot Rotor-Wing Cert Lab	1
PILT 1155	Priv Pilot Rotor-Wing Cert Lab	2
PILT 1250	Instrument Ground School	3
PILT 1265	Inst Simulator Rotor-Wing Lab	1
PILT 1305	Trans Rotor-Wing Inst Lab	1
PILT 1315	Inst Cert Rotor-Wing Lab II	2
PILT 1400	Intro to ATC	3
PILT 2050	Aviation Meteorology	3
PILT 2420	Aircraft Systems	2
PILT 2445	Mountain Flying Rotor-Wing Lab	1
	Sub-Total	24
	Total Number of Credits	32-35

Expected outcomes for successful students completing this certificate program are the ability to:

1. Earn FAA Private Pilot license.
2. Earn FAA Instrument Rating license.
3. Safely operate a light, general aviation aircraft around mountainous territory.
4. Understand and effectively operate in the Air Traffic Control system.

Faculty: Two full-time faculty and five adjunct faculty members currently teach in the Aviation Technology Department. Prior to hiring new faculty, professional credentialing will be verified and ongoing maintenance of such credentialing will be mandated. The College's grass-roots budgeting process will be followed for any request for additional faculty. On-going professional development will be encouraged and expected, including participation in at least one national meeting per year by the lead faculty member to keep the department current within the profession. Each full-time and adjunct faculty member will teach the curriculum in which they are most proficient to optimize benefit of their professional expertise to students.

Number of faculty with Doctoral degrees	Tenure	1	Contract		Adjunct	
Number of faculty with Master's degrees	Tenure	1	Contract		Adjunct	
Number of faculty with Bachelor's degrees	Tenure	1	Contract		Adjunct	
Other Faculty	Tenure		Contract		Adjunct	3

Students will evaluate all Aviation faculty members using the applicable SLCC assessment tool. The evaluation will examine teaching practices from the student perspective and highlight areas of strengths as well as areas in need of improvement. SLCC administrators and the College training office will work with any faculty in need of assistance.

Staff: The Division of Aviation and Related Technologies in the School of Apprenticeship, Aviation, and Technical Specialties will administer this program. The Division Chair, the Chair's Administrative Assistant, and Faculty Support Services will assist in support operations. It is anticipated that no additional administrative or secretarial/clerical help will be required.

Library and Information Resources: The existing Professional Pilot program resources will fully support this COC. Resources include books, videos, DVDs and other media, subscriptions, microfiche, PowerPoint, flight and maintenance manuals, component mock-ups, flight simulators, charts, graphs, etc

Admission Requirements: Admission is consistent with general SLCC admission procedures and guidelines; no special admission requirements exist with the exception of the following FAA requirements:

1. Student must pass FAA Second Class medical examination.
2. Student must meet the minimum age requirement of 17 years for Private/Instrument licensing (16 years old to solo.)
3. Student must be able to read, speak, write and understand the English language.

Student Advisement: Students will have the opportunity to consult with both academic and financial aid advisors. Students will also be encouraged to consult with Aviation faculty members for additional advising needs throughout their program.

External Review and Accreditation: The COC in Non-Commercial Fixed-Wing Flight Technology is composed of existing courses in the Professional Pilot program. Therefore, the courses have all been approved through the SLCC Curriculum process and have the support of the current Program Advisory Committee (PAC.) The PAC meets twice a year and will there evaluate the success of the proposed program, including the efficiency of the competencies defined, recommend appropriate changes based on assessment data, and help identify other advocates for the program. The proposed COC is validated by the FAA Code of Federal Regulations (CRF) Part 141 under the Professional Pilot program. There are no costs associated with this FAA requirement.

The SLCC Aviation Program Advisory Committee is composed of the following members: Kelvin Hyatt (SkyWest), Chair; Douglas Compton (Delta Airlines); Casey Knowlton (UT National Air Guard); Greg Naylor (Delta Airlines); James Pyles (FAA); Dan Sutliff (Million Air); Chris Tuckfield (United Airlines, Captain); Jason Judy (SL Int'l Airport ATC); Richard Blair (Corp. Pilot/Fog Operations, Owner); and Joe Wilkerson (NET JET Captain).

Need

The proposed COC supports the goals of the USHE Master plan with regard to Applied Technology Education and provides students the opportunity to obtain their FAA licenses and ratings.

Market Demand: This COC will lead students to FAA rating and certificates which will enable them to safely operate rotor-wing aircraft in the Intermountain Region for personal use and/or pleasure. Though the Non-Commercial Rotor-Wing Aviation Flight Technology COC is for personal development, it does provide the requisite foundation from which to expeditiously pursue high demand positions in the industry and expand educational attainment as students are able and desire to proceed further in their training.

Student Demand: The COC in Non-Commercial Rotor-Wing Aviation Flight Technology will give students the option to fast-track their FAA certification and rating to meet FAA requirements in the areas of private pilot, instrument and mountain flying. This track may then be used as a stepping-stone for students to go from a COC to a two-year degree in Professional Pilot at a pace they can financially afford. This will reduce the drop-out rate and increase the number of students finishing their education in this area of study. SLCC has seen an increase in inquiries from post-secondary, out-of-state, and international prospective students seeking careers in the aviation industry.

Year	Projected Student Headcount	# of Faculty	Student-to-Faculty Ratio	Accreditation Req'd Ratio
1	26	2	13-1	NA
2	29	2	14-1	NA
3	32	2	16-1	NA
4	35	2	17-1	NA
5	39	3	13-1	NA

Similar Programs: There are no similar programs in the Utah System of Higher Education. In addition, no Part 141 certified commercial certificates or associate degrees are offered in the State of Utah.

Program and Student Assessment

Goals for the program and measurements of success will be:

1. Enroll a minimum of 26 new students the first year with a projected 10 percent increase thereafter. (Note: The enrollment projections represent a total for Non-Commercial students, combining both Fixed-Wing and Rotor-Wing students)
2. Graduate 12 students each year.
3. 90 percent passing rate of graduates taking FAA certificate and endorsement examinations.
4. Increase the number of students achieving an AS degree through the Professional Pilot program.

It is expected that graduating students will have met and achieved the following competencies:

1. Conduct simulated instrument cross-country flight.
2. Demonstrate instrument flying procedures.
3. Demonstrate radio communication procedures.
4. Determine position in relation to the VCR stations.
5. Explain how meteorological data is gathered and used.
6. Explain NDB and GPS navigation.
7. Explain special use of airspace and different classifications of airspace.
8. Explain the operation of general aircraft systems and how they relate to flight.
9. Explain the relationship between tower, TRACON and center.
10. Identify basic ATC phraseology including ICAO alphabet and the proper order of clearance.
11. Identify how basic and advanced aerodynamics relate to operating a helicopter.
12. Identify how cross-country flight planning relate to operating a helicopter.
13. Identify how meteorology and weather information relate to operating a helicopter.
14. Identify how the National Airspace System relates to operating a helicopter.
15. Identify meteorological services available to aviation professionals.

16. Identify the limitations of a helicopter.
17. Intercept and track radials.
18. Interpret LOA's and SOP's.
19. Meet FAA FAR Part 61 and 141 requirements and pass the in-class instrument airmen knowledge exam with 80 percent minimum passing score.
20. Meet FAA FAR Part 61 and 141 requirements and pass the in-class private pilot airmen knowledge exam with 80 percent minimum passing score.
21. Obtain pre-flight and in-flight weather information.
22. Operate a rotorcraft in specialized areas including practical applications with external loads at on and off airport locations.
23. Operate the helicopter in both towered and uncontrolled flight environment.
24. Perform accurate instrument approach procedures including missed approaches.
25. Perform auto-rotations.
26. Perform IFR flight operations including cross-country.
27. Perform low rotor RPM recovery.
28. Perform specified maneuvers within a predetermined altitude, airspeed and heading.
29. Read weather reports.
30. Recall basic rules of non-radar and radar separation.
31. Safely operate the helicopter within FAA guidelines by completing the Part 141 certification requirements for check flight.
32. Settle with power recovery.
33. Solo the training helicopter safely in the traffic pattern.
34. Take-off and land from a hover.
35. Track VOR time, speed, distance computations and DME acres.

One measure of student learning will be student interest and satisfaction in reaching course objectives for each course as it is offered. One formative evaluation procedure will consist of utilizing the appropriate SLCC assessment system (IAS.) This process will evaluate student perceptions on the value of each course as they proceed toward their goal of a COC. The system assesses student viewpoints in the following areas: course content, instructor competency, understanding of major course content/principles, and the overall course. Further, a formative evaluation will occur with final examinations in each course. These exams will be constructed to focus on measuring the students' understanding of the competencies identified above. Summative evaluation will occur as students are individually assessed in preparation for the FAA certification and rating examinations. Aviation faculty will work jointly with flight instructor to assess both breadth and depth of student competencies, attitudes and skills.

Finance

The proposed COC carries no additional financial impact to the existing budget structures within the Aviation Department. This is a repackaging of existing courses to provide students another option for degree completion and thus has no budget implications.

v. New Certificate of Completion: Biomanufacturing

Request

Salt Lake Community College (SLCC) requests approval to offer a Certificate of Completion (COC) in Biomanufacturing effective Winter 2009. This program has been approved by the institutional Board of Trustees on 1 December 2008.

Program Description

The Biomanufacturing Certificate of Completion program is intended to be a short but intensive training program that could be completed in two semesters. Students shall be introduced to the history of biotechnology and the local biomanufacturing industry, including the typical manufacturing process and

career paths; acquire, develop, and master specific skills, including effective communication and documentation, workplace safety, quality control activities, and critical thinking; demonstrate their understanding of the various aspects of quality systems and regulations governing the biomanufacturing industry; and reinforce concepts and skills learned by participating as a member of a team that manufactures a specified quantity of a real biotechnological product. Students desiring additional biomanufacturing training can continue with the Biomanufacturing Diploma and/or AAS tracks.

The Biomanufacturing Program at SLCC provides students with specific and focused training for entry-level positions at companies manufacturing biotechnological products. Biotechnology is a diverse field that makes a wide spectrum of products, ranging from classical drugs and currently innovative biologics and biopharmaceuticals, to assorted medical devices, to the enzymes and DNA vectors exploited for cloning, to genetically engineered plants and modified food, to natural products extracted from botanicals, and to the developing bio-fuels that are presently a major global focus.

The program's curriculum is driven and supported by the local biomanufacturing industry, and focuses on using innovative practical activities to deliver the hands-on experience students value for the learning and reinforcement of concepts and skills. Classes are taught by faculty with extensive experience in the biotech manufacturing industry. Local companies are anticipating that their skilled workforce needs will be fulfilled by the well-trained talent produced by the Biomanufacturing Program.

Program Courses

Course Prefix & Number	Title	Credit Hours
General Education		15-16
BMAN 1110	Intro to Biomanufacturing (ID)	3
BMAN 1120	Basic Biomanufacturing Skills	1
BMAN 1150	Bioman Quality Systems & Regs	3
BMAN 1180	Biomanufacturing Experience	4
BUS 1050 – or –	Foundations of Business (ID)	3
MKTG 1050	Consumerism (ID)	3
	Total Number of Credits	29-30

Purpose of Degree: The local biotechnology industry has indicated a strong need for appropriately trained individuals for entry-level biotechnology manufacturing/production positions. The short-term and focused nature of this COC academic award will allow individuals to acquire the necessary training to qualify for such positions without a large time or financial commitment. The Biomanufacturing COC program of study is expected to provide students with a solid introduction to biomanufacturing, including a core competency in quality systems and regulations that will fulfill the minimum desired industry requirements for entry-level manufacturing positions. Successful students will be more competitive for such positions and be more effective workers from the start.

Institutional Readiness: SLCC was awarded a Department of Labor (DoL) Community-Based Job Training (CBJT) Grant (CB-15982-07-60-A-49) to develop a Biomanufacturing training program in conjunction with Granite School District. It is expected that this grant will fund all activities through to December 2010. After this, a number of these positions will be terminated and support for the remainder (the faculty and critical program support staff) will be absorbed and sustained by the SLCC Biotechnology Department in collaboration with GTI as appropriate. While the grant will cover the cost of some equipment, supplemental funding will be solicited from granting and other agencies to cover the cost of additional necessary

equipment. Clearly, this grant has made it possible to establish an administrative structure for the development of the proposed Biomanufacturing COC program.

Faculty: One full-time faculty member at SLCC is required to establish the Biomanufacturing training program and develop curriculum; this position is supported for three years by the awarded CBJT grant. Dr. Vivian Ngan-Winward has been hired as the director of the program and to fulfill this role. With over 20 years of research experience, and 8 of these in the biotechnology industry, she is well-qualified for this position. Dr. Ngan-Winward will have primary responsibility for program and curriculum development. She, along with adjunct instructors (2-3), should be able to cover the program-specific courses, and existing SLCC faculty/instructors will cover associated courses required to fulfill the program's course requirements. For each course, qualified instructor(s) will be chosen based on his(their) expertise of the topics to be covered, and they will be responsible for maintaining and keeping current their expertise, based on biomanufacturing industry trends, through attendance of workshops, conferences, short courses as needed and as funds permit.

Number of faculty with Doctoral degrees	Tenure	Contract	1	Adjunct	
Number of faculty with Master's degrees	Tenure	Contract		Adjunct	
Number of faculty with Bachelor's degrees	Tenure	Contract		Adjunct	
Other Faculty	Tenure	Contract		Adjunct	3

Staff: Because a DoL CBJT grant is funding the development of this program, the following administrative positions are required for the three-year grant funding period. By the conclusion of the DoL grant, these functions will be fully absorbed into the Biotechnology Department.

1. SLCC Principal Investigator: Clifton Sanders, Dean, School of Science, Math, and Engineering
2. GTI Co-Principal Investigator: Sandra Hemmert, Specialist, Career and Technical Education
3. Program Manager: Eleanor Sundwall

To support the SLCC director/faculty member and adjunct faculty, a part-time secretary (Anita Mitchell) will fulfill all secretarial duties related to program development and the grant as well as other relevant administration duties. This position is also funded by the grant. At the end of the funding period, this position may be continued pending availability of funding through the SLCC budget and strategic planning process. Additionally, assistance with program marketing and outreach are required for at least the first five years, and this will be fulfilled by the Biotechnology Department Outreach Coordinator (Zuraya Athie).

Library and Information Resources: The library shall acquire a select set of biomanufacturing books that will be valuable reference material for students. Faculty and adjunct faculty will be responsible for identifying these books. A cost of \$1,500 per year is estimated for the purchase of these books.

Student Advisement: Students interested in the program shall seek advice from the Academic Advisors, preferably the one assigned to the program. Students having higher level queries will be encouraged to speak with the Biomanufacturing Program Director or the Biotechnology Department Chair. Both of these individuals will work with Academic Advising to ensure that all advisors have current information regarding program requirements, job opportunities/career pathways, and additional training pathways.

Justification for Graduation Standards and Number of Credits: A total of 29-30 credit hours are required for graduation with the Biomanufacturing COC, spread among General Education and Major Requirement

courses. The Biomanufacturing COC is intended to be a short but intensive training program that will provide a solid introduction to biomanufacturing by focusing on the following:

1. history of biotechnology
2. the local biomanufacturing industry, including the typical manufacturing process and career paths
3. acquiring, developing, and mastering specific biomanufacturing-related skills, including effective communication and documentation, workplace safety, quality control activities, critical thinking, and various aspects of quality systems and regulations governing the biomanufacturing industry
4. reinforcing the above concepts and skills learned by participating as a member of team that manufactures a specified quantity of a real biotechnological product.

As confirmed by industry advisors, this curriculum meets the minimum desired industry requirements for entry-level manufacturing positions. Additionally, a solid understanding of quality systems and regulations is a core competency identified by the biomanufacturing industry. The introductory nature of this COC training program means that students can build incrementally on it by taking additional classes that will give them a Diploma (16-18 additional credit hours, 46-47 total) or an AAS degree (34-39 additional credit hours, 64-68 total). This provides several training pathway options to meet differing needs.

External Review and Accreditation. This career and technical education program was developed in close consultation with an industry advisory board that serves also as the program advisory committee. Our industry advisory board members represent an assortment of Salt Lake City biomanufacturing companies:

1. Monzur Ahmed, Senior Director of Regulatory Affairs, Neways International [natural products]
2. Kevin Hanly, Vice President of Manufacturing, ICU Medical [medical device]
3. Wade Hull, Vice President of Engineering, ZARS Pharma [pharmaceutical]
4. Jeff Nelson, President/CEO, Nelson Labs [contract testing organization]
5. Dr. Vivian Ngan-Winward, formerly Lead Scientist of Regulatory Affairs, Idaho Technology [diagnostic instrumentation and kits]
6. LaRoy Page, Managing Partner, PromoTech Partners, LLC [technology transfer consultant]

Currently, accreditation of this program is not available. As more and more training programs of this type are developed at various community colleges across the nation, educators, industry representatives, and workforce development staff alike have realized that there is a need to set curriculum and skill standards for these programs. While this endeavor is challenging, because biomanufacturing is represented by different industry sectors depending on geographic region, various groups have met and developed standards that define the required skills and knowledge for specific jobs or job families. This program has been developed using these standards as guidelines. There is an identified need to develop standards and assessments that will be recognized nationwide, which could ultimately lead to certification of students from an independent agency as well as to program accreditation. Such certification would benefit students greatly as their acquired skills would then be portable. When accreditation of this program becomes available, program staff will make efforts to seek accreditation.

Need

The biotechnology industry has experienced much growth throughout Utah, particularly in the past five years. As companies shift from focusing on the research and development of product ideas to the manufacturing of developed products and/or higher volume products, their workforce must expand. These companies need to hire production workers that will be responsible for all aspects of the manufacturing process in order to make highly technical products for profit, and hence, sustain the company.

Such companies typically hire individuals with little or no manufacturing skills into entry-level positions, and then provide basic in-house, on-the-job training. Doing so requires a financial investment, in both time and effort, by the company, and consequently diverts some of the company's resources away from production. Because this financial investment is significant, training is often limited to the minimum amount necessary for the employee to be functional, and additional training is typically provided only when absolutely necessary in order to reduce the impact on production and company profits. However, limited training can ultimately cost companies considerably. The biotechnology industry is highly regulated, and production mistakes caused by under-training or unfamiliarity of such regulations can lead to thousands to millions of dollars of lost revenue. Thus, having a properly trained workforce is critical to the success of these companies as well as the biotech industry as a whole.

Compounding the skill inadequacies is the decline in the number of young Americans choosing to pursue careers in manufacturing. This decline is related to manufacturing's negative image, one that has been sustained by the stereotypical assembly line view of the industry.

There is a critical need, for the benefit of the local and national economy, to adequately train a workforce for the ever-expanding manufacturing industry, and to empower such workers to seek and utilize self-improvement opportunities as well as to take ownership of their contributions to the workplace. This need is indeed aligned with the mission of SLCC: "to provide quality higher education and lifelong learning to people of diverse cultures, abilities, and ages, and to serve the needs of community and government agencies, business, industry and other employers."

Market Demand: The Biotechnology Industry Organization's "Technology, Talent and Capital: State Bioscience Initiatives 2008 report revealed that over the five-year 2001-06 period, the number of companies have increased by approximately 16 percent (to 42,910) and employment has increased by 5.7 percent (to approximately 1.3 million positions) in the main biotechnology sectors of agricultural feedstock and chemicals, drugs and pharmaceuticals, medical devices and equipment, and research, testing and medical laboratories. Nationally, biotechnology employment has outperformed employment in the overall private sector (which saw only a 3.1 percent increase in this same five-year period), with the bulk of the increase occurring in the last two years. Based on the current biotechnology research and development trends, the next decade will bring the establishment of new companies, such as those involved in bio-fuels, nanotechnology, and regenerative medicine. As growth continues, a considerable number of positions will need to be filled by appropriately trained individuals.

Occupational projections, forecasted by the Utah Department of Workforce Services, show that production occupations should expect a growth of approximately 4800 jobs per year over the 2004-14 period. While this number includes manufacturing sectors in addition to biotech manufacturing, the biotechnology industry is definitely expanding in Utah. As growth continues, a considerable number of positions will need to be filled by appropriately trained individuals. Thus, SLCC students graduating with a Biomanufacturing COC will be well-prepared for existing and emerging biomanufacturing job opportunities.

Students earning the Biomanufacturing COC would qualify for a wide variety of entry-level positions in biotech manufacturing companies, particularly in the areas of quality control/assurance, process development, manufacturing/production, and facilities maintenance. Some example job titles include:

- | | | |
|-----------------------------------|---------------------------|--------------------------|
| 1. Assembler | 4. Bottling packager | 7. Manufacturing lead |
| 2. Assembly production technician | 5. Calibration technician | 8. Inspector |
| 3. Auto encapsulation operator | 6. Document specialist | 9. Laboratory technician |

- | | | |
|------------------------------------|---------------------------------|----------------------------------|
| 10. Manufacturing technician | 17. Powder and liquid packager | 24. Quality assurance specialist |
| 11. Materials handler | 18. Process technician | 25. Raw material warehouse |
| 12. Materials logistics specialist | 19. Process operator | 26. Tableting operator |
| 13. Mixing operator | 20. Production associate | 27. Technician |
| 14. Molding operator | 21. Production operator | 28. Validation technician |
| 15. Packaging operator | 22. Production technician | 29. Warehouse lead |
| 16. Picking operator | 23. Quality assurance inspector | |

Student Demand: The preliminary survey of potential students has shown that a definite interest exists. While SLCC has been offering a Biotechnology Technician AAS degree program since 2001 to provide appropriate training for jobs in a research and development environment (at either academic institutions or biotechnology companies), no such program exists to provide training for jobs in a biotechnology manufacturing/production environment. The governance of biomanufacturing by strict federal regulations necessitates a program that covers such policies and relevant industry standards.

Year	Projected Student Headcount	# of Faculty	Student-to-Faculty Ratio	Accreditation Req'd Ratio
1	30	2	15	N/A
2	34	3	11	N/A
3	40	3	13	N/A
4	46	4	12	N/A
5	52	4	13	N/A

Similar Programs: No similar programs are offered elsewhere in Utah or the Intermountain Region.

Collaboration with and Impact on Other USHE Institutions: Because the Biomanufacturing COC will be a program unique to Utah and the Intermountain Region, there is no immediate impact on other USHE institutions.

Role and Mission Fit: The Biomanufacturing COC fulfills SLCC's commitment to provide quality higher education and lifelong learning to people of diverse cultures, abilities, and ages, and to serve the needs of community and government agencies, business, industry, and other employers. This career and technical education program will serve high school students, college students, and incumbent workers by preparing them to meet the workforce needs of biotechnology manufacturing companies in Utah. This preparation includes not just skills set but the confidence to win their desired position in biomanufacturing.

Program and Student Assessment

The goals of the Biomanufacturing COC are two-fold: first, to prepare students for entry-level jobs in the biotechnology manufacturing environment, and second, to prepare students for additional biomanufacturing training at SLCC.

How these goals are met will be assessed using the following methods:

1. Standardized course-specific assessment exams: These will be used to assess student mastery of the material/skills.
2. Student placement rates: The rate of student placement in biomanufacturing jobs and in additional/other training will be tracked to determine how successful this program is at meeting the above goals.
3. Student follow-up: Students will be surveyed one to two years after graduation to determine the adequacy of their training for the workforce or for additional education, as well as to solicit recommendations to improve the program.
4. Employer follow-up: Employers of program graduates will be surveyed one to two years after hiring to determine the adequacy of the graduates' training for the position held, as well as to solicit recommendations to improve the program.

Upon successful completion of the Biomanufacturing COC, students should have mastered the following:

1. history of biomanufacturing and local industry
2. understanding the typical biomanufacturing process and career paths
3. effective communication skills
4. effective documentation skills
5. proper data handling and analysis skills
6. basic laboratory and biomanufacturing skills
7. workplace and laboratory safety
8. critical thinking, troubleshooting, and problem-solving
9. quality systems and their impact on the biomanufacturing industry
10. federal regulations governing the biomanufacturing industry

Formative assessments of these competencies include independent literature research, presentations, assignments, worksheets, class discussions, and comprehensive knowledge and skills-based exams.

Finance

Financial Analysis Form					
Students	Year 1	Year 2	Year 3	Year 4	Year 5
Projected FTE Enrollment	13	15	18	20	23
Cost Per FTE	9,706	8,869	7,706	6,951	6,232
Student/Faculty Ratio	15	11	13	12	13
Projected Headcount	30	34	40	46	52
Projected Tuition	Year 1	Year 2	Year 3	Year 4	Year 5
Gross Tuition	26,741	30,855	37,026	41,140	47,311
Tuition to Program	26,741	30,855	0	0	0
5 Year Budget Projection	Year 1	Year 2	Year 3	Year 4	Year 5
Expense					
Salaries & Wages	71,080	73,213	75,409	77,671	80,002
Benefits	31,827	32,782	33,765	34,778	35,822
Total Personnel	102,907	105,995	109,174	112,450	115,823
Current Expense	26,500	30,000	26,700	28,500	29,500
Travel	0	0	0	0	0
Capital	0	0	0	0	0
Library Expense	1,500	1,500	1,500	1,500	1,500
Total Expense	\$129,407	\$135,995	\$135,874	\$140,950	\$145,323
Revenue					
Legislative Appropriation	35,805	73,759	101,296	104,335	107,465
Grants & Contracts	61,996	25,542	0	0	0
Donations	0	0	0	0	0
Reallocation	4,865	5,838	32,992	34,790	35,760
Tuition to Program	26,741	30,855	0	0	0
Fees	0	0	1,587	1,825	2,099
Total Revenue	\$129,407	\$135,995	\$135,874	\$140,950	\$145,323
Difference (Revenue-Expense)	\$0	\$0	\$0	\$0	\$0

The Department of Labor Community-Based Job Training (CBJT) Grant covers much of the proposed program's expenses through the end of December 2010, which is equivalent to the middle of Year 2 for the proposed program. Because the grant's funding year and the program's fiscal year are off-set by six months, the grant's support of the various expense items has been adjusted to be consistent with the fiscal year defined in the form above. As financial support of the proposed program shifts from the CBJT Grant to

SLCC, personnel expenses are covered by legislative appropriated funds whereas the remaining expenses are covered by reallocated funds.

Funding Sources: The implementation of the Biomanufacturing COC is supported by a \$2 million Department of Labor CBJT Grant CB-15982-07-60-A-49. This grant covers program development, creation of a state-of-the art instructional facility at Granite Technical Institute, and instructional staff. The CBJT grant will fund all activities for three years, through December 2010, at which point the faculty, facility, and operating expenses will be sustained by SLCC or GTI, as appropriate. Upon termination of the CBJT Grant funding period, legislative appropriated funds as well as funds reallocated to the Biotechnology Department will be used to sustain the proposed program.

Impact on Existing Budgets: There will be no impact on current base budgets. The Biomanufacturing Program will seek future funding, as needed, via the SLCC informed budget process. After Year 3, this proposed COC program will be supported through internal reallocation funds from the Biotechnology Department and from the SLCC informed budget process.

Recommendation

The Commissioner recommends approval of the items on the Program's Consent Calendar as noted.

William A. Sederburg
Commissioner of Higher Education

WAS/AMH

January 7, 2009

MEMORANDUM

TO: State Board of Regents
FROM: William A. Sederburg
SUBJECT: Academic Disciplines: Faculty Majors' Meetings – Report

Introduction

USHE faculty and academic advisors from over 31 academic disciplines met on September 26, 2008 for the annual Majors' Meetings to discuss common course numbers, transfer, articulation, learning outcomes and assessment, student retention, issues unsettled from the previous year and topics of concern to the discipline. These meetings, required in Regents' Policy R470, are in their 10th year. The notes from each meeting and the course grids are attached and can be found on the Regents' website. Salt Lake Community College, Larry H. Miller Professional Development Center, provided the venue for almost 500 participants.

Background

During the opening session of the Majors' Meeting, Commissioner's staff and the Regents' Task Force on General Education introduced faculty to the 'Essential Learning Outcomes' (ELO) developed by the American Association of Colleges and Universities (AAC&U) working with business, industry, policy makers and higher education faculty and administrators. The purpose for this project was to identify learning outcomes that best serve the nation's employers. An arduous vetting process produced the ELOs which follow:

Knowledge of Human Cultures and the Physical World

Through study in the sciences and mathematics, social sciences, humanities, languages, and the arts. Engage the big contemporary and enduring questions.

Intellectual and Practical Skills

Including: inquiry and analysis, critical and creative thinking, written and oral communication, quantitative literacy, information literacy, teamwork and problem solving.

Personal and Social Responsibility

Including: civic knowledge and engagement (local and global), intercultural knowledge and competence, ethical reasoning and action, and foundation and skills for lifelong learning,

all anchored through active involvement with diverse communities and real-world challenges.

Integrative Learning

Including: synthesis and advanced accomplishments across general and specialized studies and demonstrated through the application of knowledge, skills and responsibilities to new settings and complex problems.

The ELOs were developed shortly before the Congressional Reauthorization of the Higher Education Opportunity Act (2008) which, among its many requirements, includes evidence that students are learning. The accreditation community nationally was able to move the responsibility for defining learning outcomes from the U. S. Department of Education (DOE) to higher education institutions. Now all accredited institutions will need to demonstrate accountability through assessment of learning outcomes. Thus, higher education institutions are expected to answer the question: How do you know what your students are learning? Assessment of ELOs will support the new accountability requirements.

Utah's Efforts on Learning Outcomes

The Utah System of Higher Education is the only public higher education system in the country that provides a venue for annual meetings with faculty to work on general education transfer, articulation, retention, competencies for student success, and learning outcomes and assessment. It also is the only system where concern with equity in transfer was faculty-driven and continues to be overseen by the Regents' General Education Task Force, composed of faculty from all nine credit-bearing institutions who direct general education on their campuses. In 2000 the Task Force engaged state-wide faculty who teach general education courses in a process for assessing student learning. The assessments were found to show statistically-significant learning through pre- and post-tests. Now, the Regents' General Education Task Force is moving beyond these early assessments and intends to establish e-portfolios called "Educational Resumes" in which students demonstrate assessable evidence of learning based on the Essential Learning Outcomes. The Task Force hopes to begin experimentation with the "Educational Resumes" in 2010.

The work done by faculty on the Essential Learning Outcomes (ELO) during the 2008 Majors' Meetings was continued during the "What is an Educated Person?" conference held at Snowbird on November 7, 2008. During the conference, faculty discussed the ELOs across areas (humanities, fine arts, sciences, mathematics) and specifically as they applied to their institutional learning goals. General Education Task Force members are expected to continue within their institutions to identify institutional learning outcomes. Having learning outcomes identified and assessed at the institutional level will satisfy both regional accreditors and the U.S. DOE as it implements the Higher Education Opportunity Act.

The Bologna Process

Dr. Clifford Adelman, former senior research analyst for the U. S. Department of Education and now a senior associate with the Institute of Higher Education Policy in Washington, D.C. introduced Utah faculty to the Bologna Process during the Educated Person's conference in 2006. The Bologna Process began in 1999 in Bologna, Italy by education ministers from twenty-nine European countries who wanted to keep their students in Europe by breaking down educational borders and enabling their students to transfer their coursework from one European country to another. To do this, representatives from academic disciplines

had to agree on student learning outcomes and the levels of learning that are expected at each degree level (associate, bachelor, master, doctoral). The 'Tuning Process' is the methodology for producing reference points that are used to determine levels of learning and competencies in each discipline. Thus, each participating European country can be precise about what each degree means and what employers and graduate schools can expect of the students who hold associate, bachelor's, master's, and doctoral degrees. The framers of the Bologna Process aimed to assure employers that graduates were prepared to be employed throughout Europe. Now 46 countries are involved in the Bologna Process in Europe, Latin America, Australia and Central Asia.

In addition, European students can demonstrate their educational activities through a "Diploma Supplement" which Utah is calling the "Educational Resume." The difference between the "Diploma Supplement" and the Educational Resume is that the former includes educational activities while the latter will include evidence of assessable learning outcomes.

Lumina Foundation for Education

The Lumina Foundation for Education, interested in the Bologna Process because of its great potential to define exactly what a college education is and what earned degrees actually mean, is funding four state systems to begin planning how to incorporate the Bologna and Tuning Processes into higher education curricula. Utah was chosen because of its well-established Majors' Meetings, its successful transfer and articulation policies and practices and the "What is an Educated Person?" conference. While the three other states – Indiana, Louisiana, and Minnesota – are trying to find ways to identify faculty teams, Utah has well established faculty groups already working on ELOs for their individual disciplines. Utah will receive \$150,000 over this year to put the processes into place and will act as a model for the three other states.

Dr. Clifford Adelman will address the Regents on the Bologna and Tuning Processes and Utah's contribution to Lumina's project.

Commissioner's Recommendation

No action is required, although the Regents are invited to raise questions and issues.

William A. Sederburg, Commissioner

WAS/PCS/AMH
Attachment

Academic, Career and Technical Education, and Student Success Committee

Report

Majors' Meeting Notes and Course Grids

Prepared for
William A. Sederburg
by
Phyllis C. Safman, Ph.D.
and
Andrea M. Hales, J.D.

January 7, 2008

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Anthropology (ANTH)

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Articulation

There were questions about the common course number for Northern Native American Studies. The finalized number was put on the grid. SUU plans to offer a lower-division linguistics course; they will use the 1040 number to articulate.

The group discussed what constitutes a 2000-level class: 1000-level classes are introductory survey courses; 2000-level is also survey but will go into more depth. There were discussions in the past about standardizing the content of the levels at all schools but there is no consistency now, especially in the upper-division courses.

There was a long discussion about 1000-level courses being offered for non-Anthropology majors. Several other departments require their majors to take an Anthropology class (Business, Nursing, and Social Work). Does there need to be a class that these students can take (a class numbered 1000) and another class (number 1010) for majors? They decided to make no changes this year but want to discuss this next year.

Problems for students transferring from CEU and SLCC to WSU were discussed. These schools will collaborate.

Issues from 2007

High School Visits – nothing was done about this, but they all agree it's a great idea.

Concurrent Enrollment/Distance Ed – UVU offers a distance-delivered Anthropology class; WSU does not offer its classes as concurrent enrollment any more.

Certificate in Native American Studies – USU offers this at its San Juan County site – SLCC will offer a 10 day field experience class at this campus starting this year; WSU offers a minor in this; SLCC will start to move toward a Native American Studies program by offering Navajo language classes. The group would like to discuss articulation of Native American Studies classes at the next meeting.

Essential Learning Outcomes

Several schools are contemplating revamping their entire curriculum to reflect new learning outcomes. The group decided not to focus on quantifiable aspects of assessment at this meeting but rather to look at philosophical issues. All schools have learning outcomes in place because of accreditation (except the U of U). Anthropology is holistic and comparative by its nature. Each representative will go back to his/her school and match learning outcomes with each of their classes and then will email Pam Miller.

Anthropology classes incorporate all the Intellectual and Practical Skills most schools require, especially in their capstone course. Those schools without a capstone feel that students develop these skills in upper-division courses. Princeton offers a national final test for graduates in Anthropology – no Utah school is using this at this time. Portfolios – very time consuming (SLCC uses them for some of their Anthropology classes).

Anthropology emphasizes development of the skills and knowledge listed under "Personal and Social Responsibility." Anthropology has a global focus, involving students in service-learning classes, field schools, and internships. It teaches toleration and diversity appreciation. Ethical issues often come up in the study of cultural anthropology.

Assessment of LEAP outcomes are achieved in a variety of ways: exit interviews, surveys given to Gen Ed classes, senior projects, evaluation of patterns in grading in key classes, Utah Undergraduate Research in Anthropology Conference, alumni surveys, and reviewing grad school acceptance rates.

GPA

No schools let a student clear a departmental requirement with a “D” grade.

Retention

Retention is not the issue in Anthropology; it is recruitment! Anthropology graduation rates are generally higher than university averages. Retention efforts include: student clubs and research opportunities.

Other

No issues were identified.

Art (ART) and Art History (ARTH)

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Articulation

The grid for common ART and ARTH courses was passed around the table and corrected.

Issues from 2007

- Upper-division course prerequisites are up to each institution.
- Snow faculty presented a proposal for a new Associate of Fine Arts (AFA) in Visual Arts. Snow’s representatives requested feedback from the group before taking the proposal to the Board of Regents for approval. Input from the group included concerns about transferring, articulation, and Gen Ed requirements. Snow faculty explained their proposal is intended, in part, to address issues with concurrent enrollment. As it is now, there are many students who complete Gen Ed requirements and earn an associate’s degree concurrently with graduating from high school. Snow is concerned about the students it is losing through this program.
- AP: Each institution needs to decide what scores are accepted and if they apply to Gen Ed or the major, or both.

Essential Learning Outcomes

- Strong support was voiced for visual communication and visual literacy taking an equal position to other forms of communication and literacy in the LEAP document’s list of Intellectual and Practical Skills.
- In today’s world, visual art– design in particular – is a powerful influence on people’s choices and emotions. To make critical decisions as consumers of global consumer culture and as shapers of the environment, students need to learn to think visually and become engaged in their own and others’ artistic efforts.
- Yet Art is usually one of the first programs to get cut in public education.
- Participants were encouraged to attend the Snowbird conference on November 7th.
- Cooperation among departments is needed to meet a demand to incorporate art within other disciplines. The University of Oklahoma has integrated art across the university. With curricular integration, such as internships, has come greater understanding and appreciation of artistic efforts. The demand is not being met, however, because of territorial issues among the disciplines.

- How do we assess visual literacy/communication? Studio courses include ways to measure individual work against a disciplinary or course standard. These include portfolio reviews, critiques, exhibitions, and teamwork.

GPA

There is inconsistency throughout the USHE about which grades are accepted for transfer students and which grades are acceptable for students within the institution. A passing grade in a Gen Ed course is a "D-." Students who take these courses as requirements in the major the grade is a "C" or a "C-" creating a double standard.

Retention

Various strategies addressing this issue are in place. Some schools have early alert systems, especially for freshmen. Some schools call students who have not re-registered. The U of U has instituted mandatory advising for all students each semester. The department places holds on students' registrations until they meet with an advisor.

Other

Differences in the number of contact hours required for classes that give equivalent credits; variance in the teaching loads of faculty for each institution; and how these matters relate to articulation need to be addressed.

Biology (BIOL)

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Articulation

SLCC offers Biology 1610 and 1620 – this change was marked on the grid at the meeting. Both U of U and SLCC offer BIOL 2020, Cell Biology – these changes were marked on the grid at the meeting.

Articulation of BIOL 1210 and 2010 from the U of U with BIOL I and II (1610/1620 and BIOL 1620/1625) from the other schools was confirmed.

Genetics is a problem in 2-year to 4-year transfers. Some schools have articulation agreements and some do not. The problem is that it is an upper-division class at some of the 4-year schools and the students need the upper-division credit to graduate. This issue was not resolved at this meeting.

Virtual labs were discussed at length – none of the schools will accept these. All representatives wanted virtual labs marked on the transcripts. Since there is pressure at many of the schools to develop online labs, they wanted to establish a common course number to designate virtual labs. All virtual labs will have a course number ending in "3." The definition of a virtual lab is any lab that is not a "wet lab." Any subject in Biology that by its nature needs to have lab work done on a computer (i.e. BioStats) does not have to use the "3" number.

BYU has virtual labs that are identified as such on the transcript. CEU has virtual labs in BIOL 1010 and 1015. It is not marked in any way but the class title is "Virtual Lab." CEU offers this class only for high school students and the students are told the class is not transferrable. SUU has an online lab that is attached to a Gen Ed course.

There was discussion about the creation of a required Biology common core. Two-year schools would have a harder time offering the entire core because of 2-year time limitations. There was talk about which schools offer different possible core classes: Principles of Biology I and II; Evolution classes; Genetics; Ecology; and Cell Biology.

Issues from 2007

Since all schools but the U of U use Banner, there was some discussion of tracking transfer Biology students to see if schools are preparing their students well. No real action plan was agreed upon in this area.

Essential Learning Outcomes

- Many schools maintained that they must evaluate any Biology classes that will be offered for Gen Ed on the basis of criteria similar to the learning outcomes on the blue sheet.
- Most schools also said they evaluated most of their classes for similar outcomes during accreditation processes. The participants decided that as long as their departments were prepared for accreditation, they would be okay.
- SLCC offered a list of objectives and learning outcomes that they use for accreditation as a possible way to describe the discipline's contributions to the learning outcomes. The group voted to turn in SLCC's learning outcomes as their contribution to LEAP.
- A concern: too much standardization of curriculum might result from adoption of the learning outcomes. They want flexibility and saw much value in developing a diverse body of knowledge among Biology majors.
- It was suggested that the group look at the learning outcomes laid out by the National Academy of Science and the National Science Education Standards.
- Some problems in achieving some of the learning outcomes include: lack of lab space for hands-on learning; lack of communication between educators and employers to see which skills need to be developed/improved; not enough data on whether good scores on standardized tests (i.e. GRE) translates into real skills

GPA

All schools treat transfer grades as native grades as far as acceptance for filling requirements (most require a "C-").

Retention

- Enrollment is up at most schools. Open enrollment schools have a harder time with retention.
- UVU gives placement tests to all students to identify which ones need remedial work. SLCC is moving to require assessment of math and reading levels needed to be successful in every class. DSC does this already.
- SLCC has BIOL 1617 which is a Biology "help" class for students taking the Biology 1610 class.
- SUU does 5th week reports on student grades so students know if they are in trouble early in the semester.

Other

UVU has a Capitol Reef National Park field station available to all schools for field trips (contact Rene VanBuren).

Business

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Articulation

The USHE and UBAAN grids were reviewed. The grids need to be addressed annually for evaluation and changes.

Betty Tucker addressed the ASB degree transferring from the community colleges. The group believes the associate's degree is working well, with the pre-business courses taken as part of the program.

There was a question about statistics I and II from SLCC and how it transfers to the other schools. Russ Goodrich indicated that the 1st statistics course is the course that is evaluated as a transfer course (statewide), not the second statistics course. It is recommended that the 2nd statistics course be stricken from the grid for articulation.

A question was raised concerning the addition of a grammar exam as part of the pre-business requirements. USU offers such an exam (via computer) to all USU students. If their students achieve an 80% or better, they may take the ENGL course for the major. Each school handles ENGL 1010 placement differently.

Issues from 2007

No issues were identified.

Essential Learning Outcomes

Intellectual and Practical Skills—

- Inquiry and Analysis: U of U handles assessment in the capstone course, MGMT 5770. DSC looks at courses individually. Dean Templin (SUU) spoke to the aspects of AACSB, how accreditation drives the assessment and how each institution will select their desired outcomes. The Dean of each school was identified as the contact.
- Creative and Critical Thinking – DSC, SLCC, UVU, SUU and the U of U mentioned that creative and critical thinking is addressed by simulations in capstone courses or courses at some level.
- Written and Oral Communication – All are doing this.
- Quantitative Literacy – All require at least 3 math courses – some require 4. The U of U, USU, WSU, and SUU use upper-division courses or the ETS Field Exam for verification of quantitative literacy.
- Information Literacy – All are requiring proficiency at this level. An issue arose concerning the CIL computer course and the 2000-level business course, if we can have the UEC offer a 1000-level CIL approved course for transfer students. This can be done. It requires some discussion among affected faculty.
- Teamwork and Problem Solving – Job Shadowing, entrepreneurship – Team building skills are used throughout the curriculum at most of the institutions. A lot of group work is required on the business campuses. Internships should be expanded to help reach this goal.

Personal and Social Responsibility—

- Civic Knowledge and Engagement – AACSB requires ethics, service learning, etc. SUU, WSU, and DSC offer a business ethics course. DSC offers bimonthly lectures through its Institute for Business Integrity. Many the business clubs help with the personal and social responsibility aspect of the curriculum.
- Intercultural Knowledge and Competence – Study abroad, international course requirement (finance, business, marketing, IT) are ways that many courses are achieving this goal.

- Ethical Reasoning and Action – Moral and ethical judgment should be emphasized in the business curriculum to enforce the need statewide. Dr. Donald McCabe is speaking to SUU this Tuesday concerning Ethics/Judgment. Moral Courage Inventory and DIT2 test are validated tests given to students to assess their ethical commitment versus other institutional results. This will be the foundation for Academic Integrity platform and Code of Conduct for the SUU Business students. Dean Templin spoke to the group about the need to implement ethics in state business programs, showcasing Utah business students as being a very ethically-based student body.

Integrative Learning – Synthesis and advanced accomplishment across general and specialized studies: What courses require a specific GPA at transfer? Computer course requires a “B”; the business writing class must be 80% for transfer. At the U of U, MATH 1050 or 1100 should be a “B” or better and a COMM course should be a “B.” Each university requires a specific course or grade in the pre-business core of “C” or better. Each university has individual requirements, but students are handled the same whether they are a native student or transfer student.

Russ Goodrich asked how the shelf-life of math is affecting business unit requirements. Each school indicates they adhere to the math department’s rules unless the upper-level math courses are taught in the schools of business.

GPA

No issues were identified.

Retention

UVU – Enrollments are up at UVU, Snow, SUU, and WSU. Class sizes are up (no defined numbers) at USU. Upper-division business numbers are up at DSC. Business enrollments up slightly at SLCC. CEU’s numbers are down slightly more than campus numbers. Enrollment is down at U of U.

Many campuses use “deferral” to solidify students returning to their campus (missions, personal issues, etc.).

Why are students leaving campus? We need to give/receive from campus personnel information on student’s circumstance prior to leaving campus. Many campuses use mandatory advisement to aid in the retention of students.

CEU, SUU, Snow, USU, DSC, and WSU have an Early Alert system to identify students who are struggling so direct contact can be made. SUU (week 5) and SLCC (week 3) require assessment reports to identify problem grades. UVU uses an Intense Interactive program with students. DSC uses freshman orientation, barbeques, and faculty involvement to increase retention. SLCC’s School of Business uses incentives for retaining students. SLCC uses Student Services for contact. U of U freshmen get priority registration if they meet with an advisor and holds are placed on students’ files if they don’t. U of U uses guarantee plans for students putting together 4 year plans. WSU uses orientation as an incentive for early registration.

Other

No issues were identified.

Chemistry (CHEM)

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Articulation

The group would like a way to mark on transcripts virtual labs so registrars can spot them easier. Faculty need to be aware of the issues regarding virtual labs. U of U – Nursing Chemistry lab is waived but may consider a split in the future. USU – Fewer than half of the students do not require labs. USU does have 3005, but WSU does not. Labs for 3000 are rolled into class for everyone else. WSU offers the 1110/1120 series with virtual lab and 1050, but not all sections of 1110. WSU's is rolled together so it would be hard to differentiate on transcripts since not all sections do virtual labs. CEU – Intro 1010 uses virtual lab. U of U does not accept 1110 with virtual lab for nursing. SUU stated that students cannot do simple experiment models when they come from having taken a virtual model lab.

Issues from 2007

No issues were identified.

Essential Learning Outcomes

How do you know students learn? Assessment is a hard science. Learning Outcomes are not science. Learning Outcomes shouldn't just be Assessment. Doing this for Gen Ed would be an easier task than to the whole program for each institution. Outcomes used to look at retention, but now we look at retention with outcomes. Very broad outcomes are very un-assessable. Scientists believe that the quantifiable should be used in assessing outcomes. Outcome is what is projecting; assessment is what already happened.

Three things with Gen Ed that a student knows: what a chemist does; how to solve problems; and how chemistry relates to their lives. These are for the Gen Ed classes/program:

Intellectual and Practical Skills: Exhibit a general understanding of chemical concepts and skills. Develop critical thinking skills through the introduction of the scientific method. Ability to communicate quantitative and qualitative principles orally and in writing. Apply problem solving using quantitative and qualitative chemical information.

Personal and Social Responsibility: understanding the role of the chemical sciences in the world. Integrative Learning: chemistry provides a venue for integrative learning.

GPA

No issues were identified.

Retention

How underprepared are our students for Chemistry 1210? This is a good chemistry high school class. U of U doesn't enforce pre-requisites. Would it be worth creating a boot camp for Chemistry online? Instead of traditional courses, one school tried to do a sampling approach at the sophomore level.

DSC enforces its Math 1050 requirement. The Master in Chemistry requires quantitative questions that complement conceptual thinking. There needs to be good engagement in class. DSC likes "Master in Chemistry" because it forces students to have tutorials when they are not as prepared.

SUU has a drop down policy: if they failed CHEM 1210 then they go down to a lower-level class. WSU has a placement exam. Snow uses a placement exam the first week of school to tell if a student should go down a class (old ACS exam). It lets the student make the decision.

WSU enforces prerequisite of MATH 1010 (Int. Alg.) through its enrollment system. So is Chemistry 1210. Students need a Chemistry background. UVU, SLCC, USU, and SUU enforce a MATH 1050 prerequisite. CEU does not enforce a MATH 1050 prerequisite. SUU requires AP Chemistry or 2 years of high school algebra.

Other

U of U credit hour increase did not happen. The curriculum committee and the College of Science did not want it. However, U of U did successfully double the lab fee. The U of U will buy a new instrument each year with the increase of lab fees. This will impact quality of education. \$70-80 at U of U. WSU will not allow money to be used for different classes. The money has to go to that class the fee is assigned. SUU makes these decisions at Dean's council level. Proposals must show how the need serves the majority.

Spring ACS meeting is in Salt Lake. WSU brought up concern about significant accreditation changes that are in the book which we will need to address in future meetings.

Communication (COMM)

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Articulation

Each participant made changes on the common course numbers grid.

Issues from 2007

All agreed that transfer of lower-division courses for upper-division credit should be determined case-by-case.

Essential Learning Outcomes

Nick asked if including Communication theory as an outcome was possible.

- Students individually and/or in groups will demonstrate the ability to gather and synthesis information from a variety of sources to produce messages for particular audiences and purposes. This process involves inquiry and analysis; critical and creative thinking; and written and oral communication.
- Students individually and/or in groups will effectively and appropriately demonstrate the ability to receive, process, and understand messages within a variety of contexts such as historical, cultural, critical, and social.
- Students will demonstrate the ability to manage problem solving including social and task dimensions in groups and teams to meet short and long term goals. This covers teamwork and problem solving. Outcomes include group cohesion, all voices being heard, and task accomplished.

GPA

There are differences in grades required to transfer courses. Some schools want a C, others want C+. Schools deal with this issue on a case-by-case basis. Members agreed to pay attention to this problem and address it next time.

Retention

The group talked about the retention rates for face-to-face classes versus online courses. Some schools have an early alert system to help students that are struggling.

Other

SLCC and Snow have COMM courses as part of their Gen Ed.

Computer Science (CS)

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Articulation

WSU cannot use 2800 numbers based upon institutional issues. All agreed SUU's "CSIS" was ok as a prefix. The U of U will not change from upper-division but will accept other schools' 2810. USU will change their 2810 but will still accept others. CEU is developing a CS 2810 to be in place next fall.

Issues from 2007

Faculty discussed "enticing" students into CS enrollments for this fall. WSU, U of U, and SUU are up. UVU is down with day enrollments but up with night enrollments. DSC is down a little. CEU is the same.

Tracking students for Engineering Initiative: some schools are receiving monies.

Essential Learning Outcomes

What is Computer Literacy? Is it just software? For around 50% of students this is something they need but are not aware; the other 50% are bored. Three kinds of courses: Intro CS majors course (not part of Gen Ed) and Intro CS survey courses attract potential new majors. Courses could include ethical, moral, business, etc. issues. How would we work this with existing Gen Ed areas – would it be a core or distribution course and what are the politics of this?

The problem that many schools encounter is that CS is not considered a "science." This may be the opening CS needs for getting in the door for Gen Ed. The initiative should also include all departments in STEM.

Look at critical/computational thinking; thought processes; big pictures – encourage students to think in different ways using a multitude of everyday problems (see as a 2nd year course). Assessment paper/presentation incorporating the computational skills selected from a group of sample problems to include a thorough analysis. Some members also mentioned a survey of technology course.

Would like to continue this discussion between the institutions via email/internet over at least the next few weeks. Don Cooley indicated he would do this. Make sure to include Bill Evenson, Interim Gen Ed chair from USHE.

Existing Gen Ed courses: USU's Integrated Physical Science (1360) taught by CS faculty; content about big challenges we face today. U of U has a CS 1060 course which is also a Gen Ed course.

GPA

Difference in GPA within lower-division Gen Ed courses: Who enforces/makes the decision? At what administrative level? Faculty agreed that departments have autonomy over grades for major courses even if they are also Gen Ed.

Retention

Most departments do not know what their retention rates are; some are told by the college but are concerned that the data they are receiving are inaccurate. General enrollments are showing an increase. Noted that there seems to be a cyclical pattern. CEU – high retention for the school. DSC has a pre-CS class using a more visual approach and it appears to be working to keep/get students excited. USU's Computer Science enrollment is up around 10%.

How do you handle those who take a two year break?

There remains concern about low numbers of females in the programs. Faculty expressed concern about the working environment of putting in 50-60 hours a week and raising a family, especially in Utah County. Faculty stated that it is hard to impact the high schools. We should focus on retaining females once they are in the program. Faculty want to look at faculty demographic for role models/mentors.

Other

Take advantage of your media relations officers.

Most schools are besieged by employers to have students; also, many are increasing their number of interns.

Criminal Justice (CJ)

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Articulation

All courses are listed accurately on the grid; no changes.

Issues from 2007

CEU provided a syllabus electronically to the committee for a new course, CJ 2988, Ethics in Criminal Justice. The course is not designated to replace the upper-division ethics course, but the hope is the course will give a better ethical background for students in the AAS/AS degree program or pursuing certification or career improvement.

CEU asked about how the course would be accepted and applied to the CJ degree.

- SUU, WSU, and UVU will not accept the course as equivalent CJ 4200 Ethical Issues in Criminal Justice.
- UVU will accept it as elective credit; it will apply to the degree as a degree elective.
- WSU will accept it as elective credit; it will not apply to the degree. WSU is also concerned that students will take the course and expect it to transfer as equivalent to CJ 4200 and then WSU will have to deal with the frustration.
- SUU will accept it as elective credit; it may apply to the degree depending on individual student's evaluation. SUU is concerned that they will be penalized by the amount of credits students bring with them in transfer. Faculty must maintain their degree requirements, but see that approximately 70% of transfer students bring with them 70 credits and then graduate with 130+ credits. SUU fears that they will be held accountable for these students who are graduating with credits exceeding the 120 as defined by USHE. They are fearful that by adding more courses at the 2000-level, the BS granting programs could be punished for the higher credits at graduation.

- CEU may add "Introduction to" to the title of the course and details in the syllabus about the transferability of the course for students moving into BS programs. CEU will collect data and student feedback about the course that can be reviewed at next year's major's meeting. There are currently 5 students enrolled in the course for fall '08.

Deficiency in writing and communication: The committee agrees that they are seeing students with a general lack of reading, writing, and communication skills that are broader than the discipline. CJ students also need to develop technical and practical skills unique to the discipline. SLCC is developing a 2000-level course, CJ 2xxx Law Enforcement Documentation, with content specific to writing in the discipline to be offered spring 2009. This course will teach academic writing needed by police officers who fill reports and other documents; it will build on the skills from ENGL 1010 and 2010 specific to CJ. Until a course syllabus is analyzed, transferability cannot be decided. John Minichino will distribute the syllabus electronically to the committee. SUU and WSU need more information to make a decision. UVU would accept this course as a degree elective and may look to develop a similar one in its curriculum.

Essential Learning Outcomes

Snow recently developed course improvement plans to accommodate an accrediting agency's audit. Part of this plan includes department and course learning objectives and outcomes. (Paul circulated an example grid.) The committee stated that each department and course have learning outcomes and that some may contain campus wide objectives. After discussion, it was agreed that each institution will send their departmental/divisional learning outcomes to Rachel Lewis and she will create a master document to share and formalize CJ learning outcomes.

GPA

No issues were identified.

Retention

Snow saw the lowest number of enrollments ever this fall semester. Enrollment at CEU is flat on an institutional level, but CJ is growing and is now about the second largest discipline based on enrollment.

Is there a trend that people entering careers in Criminal Justice "jump-over" academia to enter the workforce directly? Utah Police Officers Association would like to add the requirement of a BS for all applicants, but they have a distinct battle between rural and metro forces. However, promotion requires education and credentials.

Other

A pilot program exists where students graduating with a degree in CJ will also have POST certification – both academic and practice. CEU is meeting with POST on October 8, will ask about this program, and will follow-up with this committee. Faculty would like to schedule a meeting with POST to discuss this and other issues.

Awarding credit for POST certification varies by institution. If the POST certification is the same, and the degree requirements are essentially the same, then shouldn't the amount of credit awarded in transfer also be the same across the USHE?

Kay Gillespie, WSU, would like to host a conference in Ogden about CJ and higher education and professionalizing the program. He will invite guest speakers from across the country to present on current topics. The committee agreed the best time for this would be in late February. Other law enforcement auxiliaries (Corrections, Utah Police Officers Assoc, POST, etc.) should be included in this conference.

The Utah Criminal Justice Collaborative degree needs some attention. Since travel budgets have shrunk and participation from all is needed, a meeting of the UTCJ will be set-up via Wimba or IVC within the next month. Campus contacts were identified and meeting details will go to them.

Dance (DANC)

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Articulation

Faculty primarily review students on a case-by-case basis. When common courses are not commonly numbered, faculty will email the specific school with the different number and ask for a change. Group members were concerned about direct articulation of courses on the grid. Some numbers are different and may or may not be equivalents. Suggestion was made that each school look at its course on the articulation database and ensure that there is a footnote or disclaimer noting that the course may or may not transfer, depending on audition skills. Articulations may need to be updated by articulation person at each school to indicate this.

Tap I is consistent throughout the USHE except the U of U – email them to change. Could Tap II be made a 2000-level? Only SUU and SLCC offer this. SLCC is PE 1590 and SUU uses 2120; the group decided to remove Tap II from the grid. The content seems very different between 2120 and 1590.

Difference between PE 1010 and PE 1075 Content – 1010 is Dance in Culture, and 1075 is a survey of Western theatrical stage forms, based more on choreography and creativity. DSC 1010 is designated as their Gen Ed course. They do not have a 1075. They requested that DSC's Dance 1075 be deleted on the grid.

Issues from 2007

Four-year schools require prerequisites for Kinesiology, but will accept Human Biology, to be evaluated on a school-by-school, student-by-student basis. Kinesiology prerequisites: UVU requires Human Anatomy; SUU requires Human Biology; WSU requires Nutrition (Health/Nutrition cross-listed course); and U of U has no pre-requisites but is two semesters instead of one. Two-year schools should advise students to take Anatomy or a Human Biology course.

Essential Learning Outcomes

Knowledge of Human Cultures and the Physical and Natural World: Understand Dance as a world and cultural phenomenon and as an identifier of cultural norms and social values. Dance allows students to communicate more deeply and more effectively crossing over cultural or other barriers with non-verbal communication. Develop a context in which to understand dance's relationship to society, culture and history. Students write response papers analyzing performances. Dance helps increase perception.

Intellectual and Practical Skills: Synthesize material, understand the significance of what students are investigating in Dance (reading, interviewing, physically exploring, etc.). Respond in a creative/artistic/imaginative manner through Dance. Problem solving, finding imaginative solutions, working together, and moving together creates a "different lens" to relate to others. Dance can be a method of symbols and interactions and a kinesthetic intelligence. Assignments include research and presentations utilizing computer and library resources and technology. Teamwork and problem solving group projects, group choreography, improvisation studies, group creative problem solving.

Quantitative literacy is felt to be non-applicable for Gen Ed undergraduate Dance program.

Personal and Social Responsibility: Students are learning interactive skills to communicate with other cultures through Dance. Many different Gen Ed topics are covered through lectures and class discussions. Students are learning to be nonjudgmental as they work with others. Students are learning the tools to participate in an art as well as be introduced to different forms of Dance, keeping their bodies healthy and firm for the remainder of their lives. Students are more competent, have increased awareness, and are able to accept one another and their bodies. Focus is enhanced; students become engaged in something valuable.

Integrative Learning: Capstone presentations and final projects are synthesis for Gen Ed outcomes. Dance applies to world events by preparation, participation, and reflection of world events.

Dance 1010 and 1075 make contributions to the Gen Ed Learning Outcomes.

In Dance, the following assessment procedures are currently being used: Assessment strategies (gather information!); e-portfolios; class work and concert performance self-assessment; videos; peers assess one another (assessment approved by department); capstone projects; class work, rehearsal process, concert performance assessment by faculty; value added assessment (pre and post); oral presentations; hands-on anatomical and kinesthetic feedback; written evaluations of teaching experiences; journaling; and observation.

GPA

The group recommends looking at a catalog for GPA requirements. But, generally: SUU allows nothing below a C; UVU requires a 2.5; SLCC, CEU, Snow, and WSU have no requirements; and WSU allows nothing below a C, general overall CPA 2.5

Retention

Once accepted into the program, faculty continue their efforts to keep the students in the program. The following are retention ideas in use: one-on-one advising designed to keep records over time; mentoring; student mentors; checklists; regular, mandatory majors meetings; once-a-month brown bag open forum; performance opportunities; and scholarships. All students have the opportunity to perform once during the school year.

Other

No issues were identified.

Developmental Mathematics (???)

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Articulation

The Developmental Math faculty do not yet have a grid but intend to create one—with common numbers. If we are going to have same numbers, we need to have the same content taught.

SLCC changed numbers, but Snow hasn't changed. CEU is the same, but not the same hours.

SLCC had the most courses so the group decided to match SLCC: Math 0900, Introductory Algebra; Math 0920, hybrid of 0900 and 0950; Math 0950, Pre algebra; Math 0970, hybrid of 0950 and 0990; Math 0990, Elementary Algebra; and Math 1000. However, since they are non-transferrable, does it matter if they are the same number?

Four schools have Elementary Algebra as four credits: Snow, SLCC, UVU, and DSC. Three schools have it as three credits: CEU, WSU, and U of U.

Hours – some have math everyday because it is good for developmental students.

Is Algebra 2 aligned with Math 1010? Committee formed earlier at Math meeting. Students who have taken Algebra 2 still struggle in Math 1010. Math 1010 is offered at UVU and SLCC as Concurrent Enrollment.

Math 0990 and 1010 sound like the same course. However, success rate is very low in both. Separate curriculum a little better to increase success rate for students. Faculty think it is the same course because both use the same book – Sullivan. They use the 1st half for 0990 and 2nd half for 1010. This is a problem for UVU. However, repetition isn't there, and repetition is good for retention of information. Also, with repetition the rigor increases.

Issues from 2007

We establish prerequisites. There is an 18-23% increase in developmental math at SLCC and UVU.

Essential Learning Outcomes

- Students are able to interpret quantitative information (i.e., formulas, graphs, tables, models, and schematics) and draw inferences from them.
- Given a quantitative problem, students are able to formulate the problem quantitatively and use appropriate arithmetical, algebraic, and/or statistical methods to solve the problem.
- Students are able to evaluate logical arguments using quantitative reasoning.
- Students are able to communicate and present quantitative results effectively.

Taken from <https://assessment.gmu.edu/Genedassessment/outcomes.cfm> on 9/26/2008.

GPA

Passing is a "C" or higher. At the next meeting, UVU and WSU will quantify the grades received by those in subsequent classes after they have taken developmental classes.

WSU's pass rate on the 6 credit 0955 class demonstrates a bell curve: pass rate was 55%, 60% without UW, 76% if drop E's. All four classes are the same. WSU does not allow students to drop a developmental math class.

Most failed UVU's 6 credit developmental math class: fall – 58% passed; spring – 65% passed; summer – 71% passed. Students must take a test and earn 80%. If they don't get 80%, they must take the workshop. If they get 80% on next test, they will not require the workshop. UVU is working to keep kids retained and with higher pass rates.

SLCC – for those that took 0990 and then took 1010, 72% passed. Of those who just took 1010, 69% passed. The workshops are optional, one credit class that is 2 hours per week. Questions are taken from test, homework, and an open setting, without structure. It is based on helping student with what they need.

Retention

CEU, Snow, and UVU use MyMathLab. If the student puts the effort in, then their results are higher than other students. It is helping at both institutions (UVU did a study and found students who used MyMathLab did 5% higher on final). It is mandatory for students at Snow, optional for CEU and UVU students.

Assessment – Outcome of experiments changes the next experiment, but outcome of class doesn't necessarily change the way we teach. Retention – we are a bottleneck to the rest of school.

Other

DSC allows calculator use at times. SLCC is the same as DSC—and does not allow with fractions. U of U and UVU do not allow calculators. Snow and CEU allow the teacher to decide—but only if it is a non-graphing calculator.

Generally, the expiration date is 1 or 2 years from the most recent ACT or Accuplacer or successful completion of Math course (with a "C" or better). CEU has no expiration of courses or test score. Snow, UVU, U of U, and DSC give 2 years. SLCC and USU only allow 1 year. WSU allows 2 years on the Act and 1 year on Accuplacer.

Most have an 18 ACT cutoff for Math 1010. UVU's cutoff is 19 on the ACT for Math 1010, but will only go to 18 with a placement test. UVU will move to Accuplacer in the fall. All should send their Accuplacer cut off to UVU (to Ben).

Students at the U of U pay out of state tuition on repeats.

If 70% of our students need developmental math, when are we raising the issue that we must change our approach to math? There is way too much emphasis on memory. 8th graders are being taught algebra when they are at 2nd grade math functioning. We need to look at what we do...we need to teach students better. We need to think through if we need to take curriculum apart and redo it. We need students to retain information 6 months after course is over.

WSU wrote down 30 ideas to teach algebra differently. If you make math common sense, it makes better sense. Waterford is doing teacher training workshops with their elementary teachers. The group would like to work together to discuss these changes in Math during the coming year, through email.

SLCC has mandatory placement. WSU has mandatory placement; students must take Math within the first 2 semesters. Once they start the sequencing, they must finish QL. Signing up for math allows them to register for any other course, but without it, they will not be able to get into any other class.

Economics (ECON)

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Articulation

USU still is going to teach ECON 1500 (Macroeconomics and American Institution Requirement) and will keep it as is for now. It may change in a couple of years. WSU indicated that they are taking ECON 1500 for their macroeconomics and their AI requirement. The other institutions were not taking the ECON 1500 from USU as two course requirements, only one.

WSU and DSC use ECON 2010 (microeconomics) as a prerequisite for ECON 2020 (macroeconomics). CEU, WSU, and UVU require MATH 1050 for ECON 2010.

The group discussed how to bring "non-math" people to take ECON 2010 if MATH 1050 is a prerequisite. There were mixed comments. Many of the schools require algebra, statistics and calculus prior to taking intermediate Economics, but not for the introductory-level micro and macroeconomics.

SLCC does not give Gen Ed credit for ECON 2010 and 2020. UVU gives Gen Ed credit for 2010 only.

Issues from 2007

No issues were identified.

Essential Learning Outcomes

How are we determining if we are producing good economists? Some institutions use 1000 and 2000-level courses to teach initial concepts and then require a second course using thought provoking and critical thinking exercises to learn the concepts from the beginning economics course. Others use pre-test/post-test scores to evaluate learning.

Some of us recently attended the Education Person's Conference where the Regents began discussions on a process for evaluating the learning outcomes assessment process for Gen Ed courses across the USHE. There might be value in extending that outcomes process to discipline learning as well but there is little enough shared documentation of the value of the "outcomes process."

A uniform methodology of learning outcomes is unique to departmental faculty, discipline and the students involved in each college. The unique characteristics of each item above help define the learning process. How do we prove how well we are doing? Assessment will give us an idea but may not give us a direct cause-and-effect relationship between the teaching and the learning. How can we effectively evaluate assessments?

GPA

The following are the GPA requirements for graduation. SUU requires a "D" average, but a 2.5 in the major. Snow, U of U (in major), and USU require a "C." WSU, SLCC, DSC, CEU, and UVU all require a "C-" to graduate.

Faculty didn't quite know how to standardize acceptable course grade since learning outcomes vary from school to school and transfer schools vary on their requirements. The group discussed requiring a higher GPA in the major than the GPA needed to graduate from the university. The U of U definitely thought that the GPA should be the same to graduate in the major. Others disagreed.

Retention

The U of U, SLCC, and CEU have a pattern that is flat or slightly down. UVU, SUU, WSU, and Snow have increased enrollments. DSC had a 30% increase in the School of Business.

Retention efforts vary from first year mandatory advisement, student success courses, faculty interaction and/or 3rd and 5th week reporting of at-risk students. Common time for students to drop out of a program is after the 1st or 2nd year. Usually, students reaching their 3rd and 4th year stay at that institution. Retention is enhanced with flexibility of the major and the fewer number of pre-requisites. In addition, the group discussed reaching out to community college transfer students at a personal level, not only at an institutional transfer level. Attracting transfer students should be initiated by helping students know how they will fit into the transfer program and what it has to offer.

The group wants the regents' office to track the students by transfer patterns. We need to do a better job (across the USHE) to evaluate student retention (rather than from campus to campus). Is there any way that we can track the individual student to see how they are transferring and why? Who is evaluating the flow of where students are obtaining the education that they are receiving? The Commissioner's Office should share its findings with us and take advantage of our disciplinary specialties in systems analysis, data analysis, incentive systems and feedback loops. Retention at the departmental level is of trivial interest in contrast to retention at the system level.

Other

Another issue was how many times a course can be repeated. UVU drops students from the major after the third attempt. USU and U of U can retake a course repeatedly. SUU allows a course to be repeated twice.

Elementary Education (???)

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Articulation

SLCC has recently added 8 new education courses to line up with U of U courses to facilitate transfer articulation.

Encourage students to keep syllabi for non-articulated courses. Inform advisors of best routes for students and why this is best. This can help prevent issues of courses needing to be repeated and will facilitate early planning.

Departments can contact colleagues across the state when developing new courses to make sure that courses will be accepted, even before being formally articulated. The exceptions are Music courses. Compare to UD teaching methods courses elsewhere, can accept as long as student will still meet UD course requirements.

Issues from 2007

- WSU is working on 2 + 2 and wants students to come with an AS in education, hopefully by September 2009.
- Intro of Integrated Science Curriculum – Rich Tolman was not present. No discussion.
- The group is concerned with concurrent enrollment. Even if students are in program courses on a college rather than on a high school campus, there are maturity issues that often prevent optimal course experience.

Essential Learning Outcomes

How do introductory courses address learning outcomes? It will be helpful to frame learning outcomes by INTASC standards for accreditation purposes. History of the world integrates with education history. Focus in this program is often on intellectual and practical skills. Oral presentations, information literacy/educational technology, team work and problem solving are all requirements.

Knowledge of personal and social responsibility is required. Civic knowledge is basic as a way to understand school board/politics, economy and budget impacts, legal and ethical liabilities. Ethics classes are not solely academic, rather practical for future teachers ("this can get me sued"); service learning courses can also address this area.

Ways to better use the Gen Ed to meet outcomes: DSC has a 1360 course, integrated physical science for science Gen Ed which is strongly recommended for students. The problem is that it is 4 hours plus lab time; the cost is higher so the students aren't as interested. SUU has an outdoor recreation class for teacher educators, which is a field experience using the Utah science core. The course is used as elective after students are admitted to the program.

GPA

"D" credit never transfers. "C" often doesn't in pre-requisite courses. SLCC mostly transfers out, but will accept "D" or higher. Faculty tell students to get a "B" for transfer purposes.

WSU has gone to "B-" to enter its program and is in sync with other departments. DSC requires a 2.75 to enter the program with prerequisite grades of 3.0; once in the program, students must maintain a 3.0. U of U requires 3.0 in program of study and "C" or better in each course. USU takes an AS straight across regardless of grades; it will look

at teacher education classes with minimum grades and treat native and transfer students the same. SUU will accept AS if courses in teacher education are "C" or above. Minimums for acceptance are varied and can change when enrollment is low, except WSU which is now at 2.5 cumulative; DSC 2.75 cumulative, pre-requisite courses often 3.0.

Retention

USU is up. U of U is up 25% secondary, 30% elementary, and special education is up, but is difficult to quantify based on interdisciplinary nature. UVU is the same but spread over cohorts. DSC is the same. WSU is experiencing a large bubble in special education with 30 students in intro and continues through program. In Utah dropouts from teaching are often found to be young women leaving to start families.

- DSC's cohort system for support is not flexible, but graduation rates are high.
- UVU's formal leave of absence program provides a chance for follow up if a student doesn't return as planned.
- UVU Latino Educators of Tomorrow: high school juniors and seniors take concurrent education classes to start connecting to the education program. The program is new and hopes to increase students and graduates.
- UVU – If a student is failing, develop a student professional development plan. Most students follow through.
- U of U peer mentor program – 10 outstanding senior students will mentor group of 10-15 students. They meet monthly to gather information and work with students. Mentors receive stipends and are supported by faculty.
- SLCC recruits high school seniors from minority areas for a minority teacher recruitment scholars program. During their first year they get tuition waivers and school districts pay fees and books. Students take 1 credit course each semester to learn about school resources, and then can be mentors the following year. Graded based on attendance. Students and parents are invited to the initial event. Often students are first generation.
- WSU focuses on people working as aides in schools who come back to college to complete a teaching degree before returning to schools. Grant funded on a federal level.
- USU has a student representative is at all undergraduate staff/faculty meetings to keep communication open. DSC has a similar system, called cohort presidents.
- DSC and U of U hold kick off events at the beginning of year and send emails to students.
- DSC checks minimum grades each term. If a student falls below a 3.0 cumulative program GPA, that student is notified of probationary status and has to meet with department chair/advisor regularly.

Many schools will do a disposition rating at various checkpoints to determine non-academic components.

All 4-years have closed admission programs requiring application. Acceptable failure rates are when students aren't a good fit for the program, they are not retained, or don't persist in career. This can be addressed to some degree by allowing large hands – one component early in their academic program to allow student to determine fit.

Other

SUU has correlated national and INTASC standards for each course, and has included it on the course syllabi. Western Governors has a strong disposition evaluation document. NAEP has a Code of Ethics. The State Board of Education is a good resource. NAEYC has a brochure on code of ethics for teachers, or state board rule and standards based on ethics, but has legal implications. Linda Alder from the State Board of Education would like to send links for information to be sent out to group including many of the rules/resources for ethics and legal issues in teacher behavior. She will send this to Amanda Hatton to pass on to group either directly or via Teddi Safman. These will be guidelines that use language that is more accessible and usable than the direct rules.

Statewide UTEAAC meetings will look at accreditation issues and meets the same day as the education deans. Next meeting is at WSU (second Thursday of each month October 9 at 10 a.m.). All 4-years with teacher education programs (including Westminster, BYU, Western Governors, and U of Phoenix) are currently represented.

It seems that some school districts prefer emergency hires of ARL candidates.

Will students be required to repeat a course completed at another institution, even if it is successfully completed at the host school? This does not appear to be the case with in-state courses. Westminster sometimes limits repeats to 2 per course and then requires students to appeal to faculty committee. Most need course within 5 years (time limits).

DSC is going to an exclusive K-6 certification in January 09. They only have 1 certification level, no bachelor's degree in early childhood, only AS. UVU is going to a K-6 certification. As of fall 2009, ECFS courses will all be in EDU, allied areas such as psychology going to social sciences. Courses will still be offered, just listed differently. USU added K-6 certification/licensure this semester and is still offering K-3 and 1-6(8). Schools can still recommend licensure for K-3, K-6, or 1-8 for elementary ed or some combination. Special ed can recommend for birth to age 5.

Engineering

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Articulation

- CCN for Statics and Strength of Materials should be 1300 with only U of U having this class.
- CCN 2250 Electrical Circuits USU, CEU, WSU, Snow; DSC will change from 2270 to 2250. UVU will keep 2270.
- CCN 2225 Electrical Circuits Lab Snow, CEU, DSC will change from 2275 to 2255.
- CCN 2260 Analog Major Circuits U of U and SLCC.
- CCN 2450 U of U has MEEN 2450 and USU now has MAE/ENGR 2450.

The faculty agreed that common course pre-fixes are not required or possible.

Issues from 2007

No agreed-upon lower-division common curriculum.

Essential Learning Outcomes

Engineering programs are already doing this through ABET Accreditation. Below is listed how ABET A-K Criteria tie in to LEAP (learning outcomes). It is recommended that teamwork and problem solving be listed as separate criteria.

ABET Criteria	LEAP	ABET Criteria	LEAP
A – Apply knowledge in math, science and engineering	1, 2, 3, 5	G – Communicate effectively	4,6
B – Design, Conduct Experiments	2	H – Understand engineering in a global context	1,8,9
C – Design a system or process	12	I – Lifelong Learning	11
D – Function on multidisciplinary teams	7	J – Contemporary Issues	6,8,9
E – Identify and Solve problems	3,7	K – Use skills, techniques for modern engineering practice	12
F – Professional and Ethical responsibility	10		

GPA

There are no GPA differences for Gen Ed; faculty follow college grade criteria. Type and number of Gen Ed courses are dependent upon department and ABET interpretation.

Retention

Engineering student societies allow major students to become mentors. Does better recruiting lead to better retention? Perhaps. We should focus on why kids drop out; factors may be natural ability in math and sciences and work ethic. Faculty should convince students that the reward is worth the effort. Give students information early and get them involved. Identify students who are having difficulty and get assistance. Early warning systems are helpful.

It is difficult to even get the numbers for retention rates; the problem is how students are classified which can be either as full majors or pre-majors, and if the pre-majors are considered engineers or undecided students.

Other

No issues were identified.

English (ENGL)

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Articulation

- WRTG 1010 and WRTG 2010 at U of U will not change the prefix due to the split-nature of the department.
- USU will change ENGL 1120, Intro to Grammar, to ENGL 1410 with a reminder sent to Dr. Smitten.
- ENGL 1120 at SUU might be unique when compared to the content of the other 1120 courses and could stand alone. SUU will submit a syllabus to the chair for review and evaluation.
- ENGL 2030 Discourse Studies may be different in content and should not share a similar number.
 - o ENGL 2030 at CEU is Great Books and Ideas – CEU will look to change the number to 2310.
 - o SLCC and UVU will exchange syllabi to determine equivalencies.
- ENGL 2700's title is Introduction to Critical Theory

Snow allows students to test out of English 1010 with an ACT score of 29 or higher and a writing examination.

Issues from 2007

Update on English 2600: An overview of ENGL 2600 commonalities was distributed by Stephen Ruffus. Within the role of critical theory, U of U's course is lacking critical reading perspectives and resembles ENGL 2200. But, due to preexisting transfer issues (primarily with SLCC), the course will remain 2600. An overview of ENGL 2200 was also distributed to the committee. The U of U's 2600 focuses on critical reading and literature in different genres but is not an introduction to theory and criticism which are covered in upper-division major courses.

Essential Learning Outcomes

The committee reviewed the learning outcomes as summarized and agreed that the English discipline already addresses each of them due to the nature of the discipline. The learning outcomes are built into each course and shown by the individual student's written evidences. Inquiry and analysis, critical and creative thinking, written and oral communication (listed under Intellectual and Practical Skills) are addressed in each English class, but especially manifest in the first year composition series (Introduction to and Intermediate Writing). Literature courses encompass intercultural knowledge and competence and ethical reasoning and action (listed under Personal and Social Responsibility) by introducing students to a variety of authors' voices and genres.

The chair requests that each institution submit to him its learning outcomes, either on a course syllabus and/or curriculum outline for the following courses. Send them to Stephen Ruffus at stephen.ruffus@slcc.edu.

- ENGL 1010 and ENGL 2010 first year composition series
- ENGL 1410 Introduction to Grammar
- ENGL 2210, 2220, 2230, 2240, 2290 Introduction to topics

GPA

English recommends a "C" or better as an acceptable GPA for English courses (and all English work in transfer).

Retention

English departments through the USHE are seeing higher enrollment, especially in creative and technical writing fields. English teaching is dropping, but not significantly.

Other

Kathy Herndon from WSU reported that as the individual at WSU who reviews transfer work for equivalencies, she is seeing courses that are 10 – 20, and even 30 years old. She asked if there is a point in time when the credit does not transfer and cannot meet Gen Ed requirements – especially the ENGL 1010, communications literacy. R470 governs the transferability of credit and the acceptance of Gen Ed in transfer, but does not address time limits.

Proposed solution: after ten years, a student must take an assessment, or placement exam, for an English Composition 1 course to be accepted as and applied to the Communications Literacy Gen Ed requirement.

MyAccess.com: Mary Beth Clark from the State Office of Education shared a writing analysis product that, pending funding, will be implemented in K-12 classrooms; more likely in the 5-12 classrooms. MyAccess.com is an online writing software and assessment program that is trait-based with an analytical domain evaluation. It houses a 1000+ writing prompt bank and essays are telemetrically scored. It is designed to provide instant feedback and demonstrated to be extremely consistent with human scoring. Each student would be provided an individual license that would follow him/her through his/her K-12 academic career. Mary Beth explained that the tool is extremely valuable for practice and is not designed to replace a teacher. Teachers could use the feedback as an additional personalized teaching tool. MyAccess.com has the capacity to create an individualized e-portfolio. Mary Beth asked that the committee ponder the value of a student's e-portfolio as he/she enters higher education as well as the value of the practice. The committee would like to participate in a demonstration of the product as volunteered by USOE.

Mary Beth was asked if the USOE would develop a writing endorsement. She will return to public education with that recommendation from the committee and start the discussion.

Exercise & Sports Science/Physical Ed. (PE__)

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Articulation

Changes to be made on grid: add PE1098 (3 credits) to SUU; delete PE1098 from WSU.

Fitness for is Life 1 credit, 2 credits, or 3 credits. The solution is different course numbering or using PEP for academic courses. SUU's class needs 3 credits to transfer for it to count because it is a required class for the majors and also counts for Gen Ed; it doesn't at other institutions.

Issues from 2007

Competencies for Anatomy/Physiology PE versus Exercise Science have different requirements. Is the intro class sufficient? Each school has very different prerequisites for each program. Are students prepared to transfer when there are different requirements for the above?

Essential Learning Outcomes

Some want to create a grid with all the classes to show which classes fit the criteria and how undergraduate research fits into all of these criteria. Basically all the classes can fit the criteria one way or another

- Intellectual and practical skills are increased through personal ability, skill analysis, labs, writing curriculum, technology course grading, rubrics, the writing curriculum, teaching, group work, and teaching.
- Personal and social responsibility is increased with service learning, field experience, state conventions, civic engagement courses, pedagogy for serving children, and labs for serving the community.
- Integrative learning is the focus of senior seminar, the e-portfolio, and undergraduate research.

Use National Standards for Beginning Teachers or NASPE standards.

There isn't a standardized test to use for Exercise Science. We could use acceptance rates and GRE for graduate school applicants, but how can this information be used to assess our programs? Some use a questionnaire but these cannot be generalized. How do individual instructors evaluate student grades based on student learning outcomes (departmental rather than national assessment)? Could require and record certifications and pass rates.

Everyone wants to know the pass rate for Praxis test; we need better access to information on Praxis <http://www.ets.org/portal/site/ets/menuitem>. This information is available at <http://www.pepraxis.com/index.html>

How to better prepare students to be equal with students across the state?

Need to show what we are doing because assessment is huge nationally to show administrators and tax-payers that our students are meeting the learning expectations. Undergraduate research is a good way to show the public. E-portfolios can be used to assess students and learning outcomes. However, assessment in general is hard because there are so many different types of students in so many different classes going into so many different careers.

GPA

Issue of requiring course repeats need a "C" or better for it to count toward major. The group discussed transfer and articulation process and how to know which classes count for SI or upper-division when transferring. Issues that are related to standardizing acceptable GPAs are 1) the specific course, and 2) when it was taken.

Retention

No discussion about enrollment patterns. No discussion on typical failure rates and how to address them.

What are the retention rates for specific programs? It is hard to find that information. Some are using exit surveys, but that does not catch all students that quit or change majors. Use student surveys to learn what important programs are and then talk to the provost to get more funding for adjuncts for activity classes. Health and wellness is a top priority to students according to certain surveys which allows more funding.

Are many students coming or going to and from the program? Is the larger number from athletes? Athletes stay in the program throughout.

Other

Undergraduate research: UT Academy for Arts, Science and Letters in late March at BYU; UAHPERD Nov 14-15 at WSU; NCUR in Wisconsin; and UCUR Feb 20 at Westminster.

Many want to open up the conversation to communicate between schools to help students transfer. (This is important.)

Family and Human Development

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Articulation

- Practicum courses (2610 lab) have not yet been officially articulated and should not be used on the course grid.
- PSY 1100 "Life Span" is equivalent to 1500 "Human Development."
- Transfer UD courses satisfy content and requirement everywhere except U of U due to programming constraints.

Issues from 2007

What's with 1100? Is acceptance consistency possible? Perhaps the problem is the PSY rather than EDU heading.

What is being done to better prepare students to enter the FHD major? USU has added EC training to all EDU programs. U of U is keeping K-3 and K-6 certificates, but has to work hard to sell K-3 to students who think they are going to be more marketable with a K-6. How do we help students realize they are just as marketable with a K-3?

Many 1-6 teachers are coming back for K. Teddi Safman explained that the statewide push towards more K-6 rather than K-3 is due to rural areas not having enough teachers; they want to be able to move teachers from K to 6 or 6 to 2. It appears the only answer is to incorporate early childhood (EC) into K-6. Does there need to be documentation to USOE outlining how schools are planning to integrate EC classes into their K-6 programs? Teddi was not aware of a formal report; rather, deans have to show they are doing it. No state-identified training measure is currently in place.

When these standards are reviewed, the K-3 versus K-6 issue needs to be addressed by the state. Tim Eicher will draft a letter for the committee to review and send to the USOE. There was supposed to be a discussion regarding licensure for birth-K; this never occurred. Instead, the K-6 decision was strong-armed through without any input.

Essential Learning Outcomes

UVU has a formal plan to measure each course against learning outcome goals. Genan Anderson will send electronic copy to panel members. Tim Eicher showed grid used at DSC to measure outcomes for all classes. A recommendation was made to gather data (i.e., NCATE standards, accreditation standards, objectives, NTASC, NAYC standards, etc.) to see what exists among all schools and establish common grid.

Diversity, life span, human development, and natural science courses increase students' knowledge of cultures and the physical/natural world. Research methods and statistics, written and oral communication courses, statistics, UD communication writing classes, math for elementary teachers, computer classes, technology classes, practicum courses, and service learning all increase students' intellectual and practical skills. Personal and social responsibility is increased by conference attendance/presentations, service learning, diversity courses, research methods courses, and portfolio requirements. Integrative learning is increased through labs and service learning opportunities.

NAEYC Standard	Description
1	Promoting child development & learning
2	Building family & community relationships
3	Observing, documenting, & assessing to support young children & families
4	Teaching & Learning. a: Connecting with children & families. b: Using developmentally effective approaches. c: Understanding content knowledge in early education. d: Building meaningful curriculum
5	Becoming a professional

EDEC 2300 Including Young Diverse Learners: Course Objectives	NAEYC
Describe special ed federal & state laws, & how they apply to policies & best practices for educating young children with special needs, including service coordination, child find, evaluation, & ongoing assessment.	1
Describe state & fed laws & how they apply to policies & best practices for educating young children of various linguistic & ethnic heritages.	1
Describe how to create an anti-bias, inclusive early childhood environment.	1
Demonstrate awareness of inclusive, anti-bias classroom strategies & adaptations for supporting learning & devel.	1
Describe variations of devel & disability & their implications for the early childhood classroom.	1
Assess & monitor the devel of children who are evidencing or who are at risk for devel-al delays & be able to join in an IFSP or IEP meeting.	3
Find resources for teaching young children of any ethnic background or having any special need.	1
Describe the effects of various cultures of atypical devel on infant/care giver & other family interactions.	2
Describe the develal contributions of culture, ethnicity, & race.	1
EDEC 2500 Child Devel Birth to Eight Years: Course Objectives	NAEYC
Demonstrate knowledge of growth & devel of infants to 8 yrs across cognitive physical, social, emotional, moral, & creative domains.	1
Recognize significant milestones & variations of early devel.	1
Explain the importance of understanding the variations in children's devel, interests, & temperament.	1
Explain the influence of out-of-home care, early schooling, the role of play, socialization, nutrition, feeding & toilet routines, & child guidance	1
Demonstrate competence in focused observation & assessment	3
Explain the interactions of the culture of the child & their family on other aspects of their devel; i.e. socialization, cognitive develop	2
Begin to be able to identify behaviors that fall beyond normative range.	3
EDEC 2600 Introduction to Early Childhood Ed: Course Objectives	NAEYC
Critically evaluate the question, "Why do I want to be a teacher of young children?"	5
Explain programs, philosophies, & historical backgrounds of early childhood ed to assist in formulating a personal belief about how children best learn & how they should be taught.	1, 5
Understand the value of early childhood ed & the importance of the role of teacher, parent, family, & community in the child's edal process	1, 2
Distinguish between different curriculum models that meet the diverse needs, including cultural, gender, socioeconomic & special needs.	1, 2
Discriminate measures of quality found in early childhood programs & develop skills in evaluating programs	1
Become familiar with the term "Develally Appropriate Practice" & describe how it applies to the 0-8 age population	1
Understand the roles that early childhood profs encounter, including ethics, public policy, & working with other agencies & businesses.	5
Examine & collaboratively discuss early childhood issues & have field experiences	3, 5
EDEC 2610 Child Guidance: Course Objectives	NAEYC
Come to understand that guiding children's learning is chiefly based on knowledge of child devel principles (cognitive, social, emot. & lang).	1
Appreciate the adult's role in the guidance process; understanding that practices can facilitate or impede social & emotional growth.	1

Be acquainted with techs of observing & recording behaviors for the purpose of creating learning envir, assessing devel & guiding behavior.	2, 3
Environments conducive in meeting the devel-al & diverse needs of children; including cultural, gender, socioeconomic, & special needs.	5
Be actively involved in forming their own philosophy of guiding, managing, directing & influencing children's behavior in accordance with NAEYC guidelines: emphasizing self-esteem, self-control & concern for others in a young child's devel.	1
Be exposed to devel-al principles & techs that assure inquiry, independence promoted situations, divergent thinking, & choice making skills.	1
Discover that child guidance is partially technique & largely attitude.	1
Develop collaborative skills in observing & assessing children's social & emotional devel.	2, 3
EDEC 2620 Early Childhood Curriculum: Course Objective	NAEYC
Explain why play, physical environments & learning centers, math, art, science & develally appropriate practice are important to devel.	1, 4c
Cultivate scientific inquiry & methodology in young children.	1, 4a, 4b, 4c, 4d
Explain the role of a teacher in implementing curriculum.	1, 4b, 4d
Develop, demonstrate, & participate in devel-ally appropriate activities in specific curriculum areas.	4b, 4c, 4d, 5
Apply information on how children learn to the devel of learning plans.	1, 3, 4a, 4c, 4d, 5
Write appropriate curriculum learning plans with clear develal objectives & concepts, evaluate presentations.	1, 3, 4a, 4c, 4d, 5
EDEC 2640 Literacy & Literature for Early Childhood: Course Objectives	NAEYC
Implement instructional strategies appropriate to young children through grade three.	4b, 4d
Demonstrate an understanding of the practical aspects of fostering literacy.	1, 4c
Recognize the major theorists & theories of language & literacy devel.	1, 4c
Demonstrate understanding of emergent & early literacy behaviors in children ages 0-8 years.	1, 4c
Understand the role children's literature & environmental print play in early literacy devel.	1, 4c, 4d
Assess young children's literacy devel.	3
EDEC 2700 Early Childhood Practicum: Course Objectives	NAEYC
Design & implement integrated activities which are develally appropriate for young children	1, 4b, 4c, 4d
Contrast & compare observations of young children with develal theories	1
Design & implement instructional strategies which are appropriate to a pre-K classroom & a develal understanding of young children	1, 4b, 4c, 4d
Model appropriate affect & instructional strategy for young children to peers & supervisors	4a, 5
Use assessment information to evaluate & revise instructional activities	4d, 5
Develop & implement ways of involving parents in the ed of their children.	2, 4a, 5
EDEC 2720 Early Childhood Assessment: Course Objectives	NAEYC
Write objective anecdotal assessments of young children's learning in the domains of physical, social, language, literacy, & cognitive devel	3
Include checklist assessment in curriculum learning plans	3
Implement event sampling & center logs to guide curriculum	3
Prepare child portfolio assessment to include anecdotal assessment, artifacts & photos	3
Connect daily assessment to curriculum; use assessment information to evaluate & revise instructional activities	3, 4a, 4b, 4c, 4d
Prepare professional portfolio assessment	5

GPA

It was agreed that standards are not being lowered for majors. Transfer "D"s will be accepted but will not count towards completion of major requirements.

Retention

Enrollment patterns are declining! There is a lack of focus on K-3 licensure. Another issue is vague major identification (advisors need to be educated to articulate all the options available to students). Offices that work with undeclared students need to be educated to identify potential students and direct them towards ECE, FHD majors.

There was a discussion on how to track students who leave. USU (Marilyn Kruse) tracks students and the reason why they leave. Continuing efforts to address retention (working/not working).

Other

No issues were identified.

Geography (GEOG)

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Articulation

No changes need to be made to the grid, currently. But, GIS 1800 might be changing at SLCC to GEOG/GIS 1800.

Issues from 2007

Have SLCC GIS courses included more theory for articulation to the U of U? Yes, they covered the theory they expected to transfer into upper-division at the U of U, using the same book as the U of U and synchronizing similar information. Are students having taken the hands-on GIS prepared at transfer for GIS? The theory is now being added to the hands-on classes with labs, by using similar books as the U of U.

Should 3000-level classes without prerequisites be 2000-level courses? The group agreed that they don't really need prerequisites for 3000-level courses because they are not sequenced-based like science or math classes. The classes that are 3000-level are more for depth classes, and they do not need to be changed to 2000-level courses.

Essential Learning Outcomes

In the near future evaluate the ELOs for the Geography discipline to be a little more specific. At this time faculty feel that all of these are covered in their major.

Geography covers the knowledge of human cultures and the physical natural world. Geography covers many intellectual and practical skills like inquiry and analysis – example map analysis and spatial aspect (if a student understands geography they will be better historians, etc.). Critical thinking evaluators of statistics and media, etc. Problem solving is accomplished through labs with hands-on experience. A student should walk away with all the ELOs. Geography also meets personal and social responsibility. All of the courses fit into the ELOs.

By using all the same books or similar outcomes standardized learning can be met all across the board. Are you sure you want to standardize? You can arrive at assessing for competency without standardization. Assessment will come later. Ethical reasoning and action is touched on in the movement class.

GPA

If a student gets a "D" in Geography at one school as part of their Gen Ed and then they transfer to another institution and the receiving institution accepts that grade for their Gen Ed, but the major requires a minimum of "C-," students will have to repeat the course. This is based on the departmental requirements, not the institution's policies.

Retention

As the economy dips, more students enter or return to school. However, we are losing resources to retain students.

One idea is to expose undergraduates to introductory Geography courses to interest them by taking Gen Ed requirements that will be fulfilled by Geography courses.

The later classes during the evenings are getting more enrollments. This seems to be related to students' jobs. Their employers might be paying for those classes as they are more job-specific.

Other

SLCC is now envied for software for their students in their maps and measurements course.

USU may not offer a teaching Geography major. The professor who teaches Geography at the U of U is leaving. U of U and WSU offer the course. Could USU still offer a teaching Geography major by taking it as an online course?

Geology (GEO)

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Articulation

- USU 1010 is actually an introductory course for non majors. USU did the paperwork to make the name change Geology of National Parks. We need to look into this because name change was submitted.
- USU 1120 is no longer offered as a course. Delete from course grid.
- USU Oceanography is upper-division to fulfill a depth requirement. Transferring this course into USU cannot count as a depth requirement. The group discussed why it can't transfer straight across. 1080 and 1085 should have names changed to "Introduction to Oceanography."
- UVU GEO 102H, faculty member doesn't know what that class is. The group questioned what "H" is on the end of the course number. Honors? We need to check on this.

Issues from 2007

Should there be a lab in GEOL 1010? Departments have limited resources to do this. What is GEOL 1010 without a lab? Positioning is important. This may lower enrollment because students don't want to come back to a lab. We will explore during learning outcomes.

Is there a relatively common core? Yes, there is a common core.

Essential Learning Outcomes

The three big questions in Geology regard knowledge of human cultures: time and change; evolution of life and the earth; and interaction of humans with natural environment (energy, global warning, hazards, etc.). There should be a lab required in Gen Ed PS/LS with the understanding that there would be adequate resources, thus enhancing intellectual and practical skills. Integrative learning is increased as students use capstone projects for majors. Geology contributes to all outcomes to some extent depending on the class. All courses contribute, but to what extent depends on the class. Discussion continued on using portfolios to measure assessment outcomes; they need assignments other than exams to show that students are meeting goals.

GPA

Gen Ed depends on whether the students transfer with an AS or not. There is standardization in each school but not statewide. Geology majors must repeat any required major courses that are transferred with a grade of "C" or below.

Retention

Faculty need data to be able to see exact retention rates of Geology classes. Engagement isn't the question; students can't seem to meet measures to succeed in classes. Retention is about economic issues and wanting to be there, not engagement. Contradiction? Geology helps with retention by engaging students and teaching practical skills.

Other

No issues were identified.

History (HIST)

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Articulation

Everyone noted changes, and the grid was submitted at the end of the meeting. Reviewed History Transfer Chart prepared by the Regents Office.

Issues from 2007

Should 2-year students be encouraged to take language for the BA degree? History group is committed to encourage majors to take language whether it's a teaching degree or not. Governor's World Language Summit is going in the right direction. U of U – Only has BA degree; students with AS have to take language. CEU – Students wanting to go into History Teaching have to do the BS degree. UVU – the BS is for Teachers; the BS is for History Majors. USU – They have made changes to the BS degree.

Concurrent Issues: CEU – World History not eligible for concurrent because it's a 2 semester course; it creates a concurrent problem. USU – History Teaching majors must take HIST 2700 and 2710, not HIST 1700 for AI. U of U – Gen Ed AI is HIST 1700. Majors must take 2700 + 2710. SLCC – We make them take all three.

Essential Learning Outcomes

Human cultures and the physical and natural world

- HIST 1700 is generally taught across the country as a survey course versus chronological asking the big questions – Why did we have to have a civil war or revolutionary war? The History discipline requires specific critical thinking. How history works on other majors.
- USU does big question Gen Ed courses which are taught cross discipline with a broad survey approach versus chronological order. Norm gets money from the Provost's Office.
- WSU's first year courses haven't been made interdisciplinary due to 2 problems, credit hours and BANNER.
- U of U – HIST 1700 teachers are the best History teachers.
- CEU – Challenge of History applying to trades students.

Intellectual and Practical Skills

- WSU – History should take the lead to articulate and decide how we assess it. Historians are writers. Our culture puts less emphasis on the need to make cogent, passionate arguments. The History discipline is about reading, writing and historical perspective.
- SLCC – We have capped HIST 1700 at 35 students per section. Require writing/document analysis with about 80% essay. Lots of adjunct training. SLCC has college-wide learning outcomes.
- U of U – Can't cap classes due to economics, eliminated discussion sections. Small sections of about 40 students are taught by advanced doctoral students. (Honors capped at 25.) Spring 2008 began online class which is the largest course, moving that direction for survey courses.
- USU – We teach reading, writing and thinking but need more resources. Sections are about 110+ students (except Honors sections).

Personal and Social Responsibility

- There is a national argument for civic engagement beyond working at the soup kitchen. For example, why there is a soup kitchen in the first place?
- WSU – poll students on a perspective, have visits from experts, and poll again.

- UVU – Has an internship course to collect histories from Crandall Canyon people; funded through a \$2.5K grant.
- U of U – the U's Neighborhood Partners link training to develop materials to help immigrants tell their stories. Then, the class presents the oral history back to the community to get feedback to ensure it is right. Students are in contact with Westside leaders through the Westside Leadership Institute.
- SLCC – Living museum project is on the back burner due to funding issues.
- CEU – As part of their proposed ELOs, they included the ability to act responsibly and effectively in informed and disciplined habits of working and living; ethical reasoning and action and civic knowledge and engagement.

Integrative Learning

- How does the History discipline contribute?
- UVU – creating interdisciplinary studies minors across departments and schools, such as American Studies, Cinema Studies, Class Studies, Senior Capstone class.
- U of U – the capstone experience is their primary assessment tool. Interdisciplinary programs create an upper-division challenge when students have only taken HIST 1700. It encourages faculty to create 2 sets of courses, one for majors and one for interdisciplinary students. History courses are good integrative courses.

GPA

Students with an AS/AA degree who earn a "D-" will have this accepted for Gen Ed. A "C" is required for majors.

Retention

- The majority of students typically graduate from the same institution in which they first enrolled.
- UVU – new program with advising to do a midterm grade report with select courses.
- SLCC – with courses capped at 35, instructors call students at home who are not showing up or doing poorly. Personal contact has made a huge difference. SLCC loses students between the first and second semester because students who place into Dev Ed bypass that coursework and do poorly in college-level coursework. (Utah research does not support this statement) SLCC has a new assessment initiative where students must complete placement testing to finalize the admissions decision. Fall 2010: students who place into developmental education must begin coursework there.
- USU – new early alert system where faculty sets a standard. For example, if students earn below a "C" grade on the first paper, faculty alert the Retention Office.
- U of U – Students can declare a pre-History major. Department contacts students about declaring the major.

Other

- U of U students who participate in study abroad are really good students.
- Historiography is being offered at 3 schools, UVU, WSU and SUU.
- Discipline is under assault regarding its value.
- USOE Grades 3-6 are not teaching History. It's not on the test although the USOE is trying to include it in Language Arts.
- Next Year:
 - o Online issues with HIST 2700 and 2710
 - o Discuss models of online instruction.
 - o How to evaluate Personal Social Responsibility with online courses.
 - o How do you prove that students are learning what you say they are learning?

Mathematics (MATH)

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Articulation

SLCC now offers MATH 2040, 2270, and 2280. CEU MATH 2220 is CEU's discrete Math for transfer to USU Engineering. The discrete Math classes should be distinguished by the prerequisite course required (see grid). Certain Math classes will always have a different prefix (and sometimes number, too) because they are taught in other departments. Grid submitted to Andrea Hales 9/29/08.

Issues from 2007

Will pre-calculus be included in the Trigonometry course? DSC and Snow teach a combination course. If MATH 1060 is only 2 credit hours instead of 3 credit hours, can Math 1060 with 2 credit hours fulfill the requirement? No: Regent policy requires 3 credit hours of Quantitative Literacy. Also, some institutions have Math 1010 as the prerequisite for Math 1060; Regent policy states "Math 1050 or any class for which Math 1050 is a prerequisite."

Should Algebra II/MATH 1010 be offered with less breadth and more depth? The high school Algebra II contains statistics and trigonometry, and doesn't cover factoring. The two classes have different purposes. Per the UVU comparison of two years ago, there are 17 competencies covered in Math 1010 that are not covered in Algebra II, yet Algebra II is considered preparatory for MATH 1050. This is a mismatch between high school and post-secondary. Another issue that illustrates this "mismatch" is scheduling. High school students learn at a slower pace and cover less than those who are learning faster. Also, students who come from high schools are dependent on calculators. Could it be we are starting from a false assumption that Algebra II should prepare students for MATH 1050? Taking MATH 1010 allows students to segue into college mathematics. There are political issues with this thinking. The legislature expects Algebra II to "equate" to MATH 1010. Perhaps we should move, yet again, to make MATH 1010 remedial. Previously, the CAOs resisted this idea. They may be more amenable now. Making MATH 1010 a remedial course may create problems for programs where accrediting agencies require credit courses. Also, a credit-bearing number distinguishes this course from arithmetic courses. If USHE could provide the research to USOE, public education math teachers and counselors may embrace the notion that Algebra II and MATH 1010 are misaligned. USHE and USOE should meet to review Algebra II and MATH 1010 competencies in depth.

There has been an increase in asking about the differences between concurrent enrollment and AP. With AP there is one test which you either pass or don't. If you earn a "C" in MATH 1050 concurrent, you get 4 university credits.

Is a master's degree in Math acceptable for concurrent adjunct status? Institutions have unique but similar standards. SLCC wants a master's degree and 18 hours beyond calculus, preferably calculus II or Level 4 licensure. DSC requires a master's degree with 18 hours above 1220. UVU is a master's degree and 18 hours of graduate mathematics. USU requires Level 4 certification. Level 4 is a common standard for MATH 1050 or 1060.

If MATH 1050 is not appropriate for a major, is there a hybrid that is? SLCC, SUU, and U of U offer MATH 1090. There is concern for students taking MATH 1090 in a non-calculus bound major and then switching majors. If a major does not want to require MATH 1050, why not require MATH 1030/1040? This is an institutional issue of promoting awareness of the option. There will be resistance and limited adoption for the reason stated above.

Essential Learning Outcomes

Math departments are in varying stages of creating ELOs. Departments will send their learning outcomes to Cyd. The Math discipline contributes to inquiry and analysis, critical and creative thinking, QL, and teamwork and problem solving. All MATH Gen Ed and major courses contribute to and support these ELOs.

Assessment strategies –

- When multiple people are involved in rating/grading, what measures are in place to ensure inter-rater reliability? How do you measure how teachers prepare students for success? Can institutions share grading rubrics among institutions to see if they are “on the same page”? We should be looking at where students are performing poorly such that instruction can be adjusted.
- Another issue of differing strategies is how institutions administer finals. At several institutions, finals are given at exactly the same time in rooms across the campus, often using the same test versus different versions of the test. There are extreme cases where students pass all midterms graded by an instructor, but fare poorly on the final graded by a different instructor. Can the committee suggest best practice for ensuring consistent grading? BYU had a departmental calculus exam. Different professors graded all exams for questions 1-10, for example.
- U of U is thinking about giving a sampling of graduation students an exit exam (students will be compensated to take an entrance and exit exam). If a group of students did poorly on stats, for example, which stats class did they take? The U of U will also track whether the class was taken in a traditional classroom or online.

GPA

Regent policy states students retaking a class multiple times must pay the full cost of instruction. The majority of students repeating courses take the class and fail, retake and pass. A small number of students repeat multiple times. This group often never shows up for class. At UVU, about 1,500 MATH 1050 students in 10 years (out of 20,000) took a Math class twice. Third attempt 600. Fourth attempt 25. At USU, the placement test is accurately placing students and reducing repeated classes, thus helping retention.

USHE institutions have the same GPA requirements for prerequisite courses but different GPA requirements for Gen Ed completion. Math departments have no control over Gen Ed GPA requirements. Gen Ed requirements may state the class that counts as the QL must have a “D-.” This is problematic for transfer. A “D-” in MATH 1010 from SLCC won’t transfer unless the student completes the AS/AA. At what GPA do you get credit for the class versus what GPA is needed for a prerequisite versus what GPA will transfer?

Retention

At USU, placement testing is positively impacting bottlenecks like MATH 1050. Placement is distributing students and creating new bottlenecks by placing more students in preparatory classes. There has been a loss of enrollment in more advanced classes. It is assumed that this is temporary until students complete their preparatory classes and then move on through Math sequences. USOE’s state initiative to use the Accuplacer in 10th grade (Blue Ribbon Committee) may also impact retention.

Accuplacer placement testing across the USHE is improving retention because students are being properly placed. Proper placement is also reducing the number of students repeating classes. Failure rates are also decreasing.

The whole prerequisite issue, aging test or prerequisite class for Math classes, may be perceived by some as sabotaging retention. Math departments need to inform advisors of the value of placement testing and the various options for being successful in Math classes including placement, tutoring, and preparatory instruction. The committee could request a state mandate that students start their Math sequences early. WSU requires students to start Math classes by the second semester. USU started early and met often with advisors, the registrar, and related groups to orient them to Accuplacer placement testing. The USU math coordinator goes to monthly advisor meetings.

EU and UW are artificially inflating failure rates. Placement testing across the USHE is positively impacting failure rates. Data are being gathered that should show this.

Other

WSU Philosophy course which counts at WSU as QL: WSU has added a statement that the class will not transfer. This has reduced enrollments from 150 to 80 a semester.

Music (MUSC)

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Articulation

- MUSC 1100 Elements of Music/Music Fundamentals/Rudiments: SLCC offers it. Class is only for majors at U of U and is taught online (MUSC 1460 counts for Gen Ed). At Snow, USU and UVU – used for Gen Ed credit. At UVU, only 2 credit hours; students must take 1 hour ensemble class in conjunction for Gen Ed credit. At WSU and SLCC, only 2 credit hours.
- Several schools are moving toward proposing ensemble classes that count for Gen Ed credit.
- MUSC 2120 Theory 4: Not taught at U of U or CEU. U of U offers MUSC 3550 20th Century Technique instead.
- Piano Proficiency: All require piano proficiency; not necessarily class hours (they can test out). Numbering systems are different, but hours transferring between institutions is a non-issue.
- Sight Singing/Ear Training: UVU does not have 3rd and 4th semester (2130 and 2140), but is working toward having these courses. UVU will use same course numbers. All others require them.
- MUSC 2350 Fundamentals of Conducting: All except WSU offer this. WSU offers 2 upper-division courses (choral 3872-3882 and instrumental conducting 3822-23) instead. WSU would require a student to take these courses even if the student took MUSC 2350 at another institution unless he/she is able to show competency.

Issues from 2007

No issues were identified.

Essential Learning Outcomes

The group discussed the Voluntary System of Accountability (VSA) Pre-emptive strike against No Child Left Behind on the higher education level. U of U, USU, and UVU are the three Utah schools involved with this. Wondering how LDS missions affect how Utah schools are compared with other colleges nationwide.

- Gen Ed courses that contribute to fulfilling knowledge of human cultures and the physical and natural world: Intro to Music; Survey of Jazz; World Music; Masterpieces of Music (Music History for Non-majors); American Popular Music; Ensembles; and Intro to Music Technology – SLCC.
- Gen Ed courses that contribute to fulfilling intellectual and practical skills: Music Theory – 20th Century Theory; Aural Skills; Diction; Band/Orchestra/Choir/small ensembles; Composition; Education courses; Applied Music Courses; Music History; Pedagogy/Methods; and Conducting.
- Gen Ed courses that contribute to fulfilling personal and social responsibility: Ensembles; Applied music; Chamber music; Music Education; Music Therapy; Music in Religion; World Music; and Survey of Jazz. Any music class contributes to lifelong learning!!
- Gen Ed courses that contribute to fulfilling integrative learning: Intro to Music Technology; Conducting; Intro to Music Courses; Form and Analysis; Recitals; Student Teaching; and Concerts.

How can we create music experiences that satisfy Gen Ed requirements and keep high standards for music majors?

SLCC is developing a commercial music side of the program and is working with Communication and Film departments to integrate/collaborate on a projects class. This will offer a real world working opportunity. This will bring together interdisciplinary experiences/collaboration, academic and non-academic.

Some schools teach Arts in Cultural Context/Civilizations courses – integrated courses combining art forms (for example, studying 1940's in music, dance, theatre, film, art) – and culminating in final project. These courses are more effective than courses that teach one arts discipline at a time and do not integrate the other art forms.

GPA

Most schools require a "C" in major courses. U of U → "C+." USU → "C-." Minimum "B" in applied music for majors. No institution is sure about Gen Ed because it is not an issue. This should be addressed by Gen Ed people.

Retention

- Snow is trying to ascertain why a student comes to college. Adjusting what success means based on what students want/expect. Some students don't necessarily want a degree – just an "away from home" experience.
- Many students love Music, start in Music, and then realize they may not want a career in Music. All schools see drop off w/Music Theory.
- Schools that offer minors may have TAs/Grad Assistants teach private lessons.
- Several schools offer First Year Music Experience/How to be a Music Major.

Other

- DSC is planning and raising funds for a new building which will include a choral rehearsal room, Music library, and practice rooms.
- Some schools require Music students to take specific Music courses to fulfill fine arts requirements for Gen Ed. Others assume students get enough fine arts as a major in fine arts and don't require specifics.
- NASM accreditation NASM in Seattle is the week before Thanksgiving.
- Private lesson fees 1 credit hour \$380 at U of U, \$350 at WSU and DSC, \$370 at Snow, \$315 at UVU, \$357.50 at USU, \$320 at SUU (or \$200 for 30 minutes), \$240 at SLCC (will raise soon), 14 or 12 one-hour lessons per semester; some offer weekly master class in conjunction with the studio classes.

Nutrition (NUTR/NFS)

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Articulation

Many schools are using a textbook by Melvin Williams for sport nutrition. SLCC will look into using this text.

Issues from 2007

Pre-requisites for 4020

- SUU – Nutrition 1020, 2020, Chem. 1210/1220.
- USU – Nutrition 1020, BIOL 2420, CHEM 1210/1220/2310/2320/CHEM 3700.
- U of U course # for Advanced Nutrition is not 4020, but 4440, pre-requisites are 1020, BIOL 1210.
- USU has 4440 as different course, Food Science, Fundamentals of Food Engineering.

- USU will not accept NUTR 4020 from other schools unless there is a biochemistry prerequisite to the course.

Even though this was a concern, the courses are different and situations seem isolated (since course is 4000-level and students are less likely to transfer after that) that they should be dealt with on an individual basis.

Essential Learning Outcomes

The scientific content in the Nutrition courses, the diversity of learning tools, and the opportunities to apply knowledge develops a variety of learning abilities which ultimately produces professionals who will continue to learn, live healthy lifestyles, contribute to their professional organizations, and influence positively the lives of many.

Students who complete the minor in Nutrition Education (WSU) are able to perform diet analysis, design diets, educate with multicultural sensitivity, research the current scientific literature, assimilate the nutrition information and communicate competently in written and oral form using presentation software.

The Online Lifespan Nutrition Emphasis offered at WSU through the BIS program provides nutrition education during the lifespan, with emphases for the athlete, and for those with nutritionally-related chronic diseases. Students who complete the online emphasis area in Lifespan Nutrition are able to perform diet analysis, design diets, and are knowledgeable in human lifespan nutritional issues, including the recognition of credible nutrition information, community nutrition resources, and can use their knowledge base to improve the health and lifestyles of many.

Student portfolios include the evidence of the students' skills, knowledge and competencies. Each nutrition course identifies in the course syllabus the portfolio pieces the student should include in his or her portfolio.

Currently the NUTR LS 1020 course provides Life Science Gen Ed fulfillment at most institutions of higher education in Utah. The goals, objectives and competencies of the course reflect the contribution that this course makes to the Gen Ed program. Through homework assignments, student projects and examination, the influence that the chemical composition of food has on the living system is explored. The genetic engineering of crops, production of food and food safety issues provides further opportunities to integrate discussions of the environmental impact on our society.

- The course goals are to:
 - o Provide the student with basic science and critical lifestyle information that will augment the personal ability to sustain life-long health and learning.
 - o Serve as the foundation course for subsequent course work in the area of nutrition.
 - o Satisfy a life science Gen Ed course requirement.
- The course objectives are to:
 - o Introduce nutritional sciences and the methods used in the discipline.
 - o Plan, evaluate, and manage diets that support life-long health. Learn how to consume a healthy diet.
 - o Utilize USDA database and diet analysis software to determine nutrient values of food.
 - o Learn how the body processes food and utilizes nutrients with reference to energy balance and weight.
 - o Understand the association of nutrition, exercise and lifestyle in relation to health.
 - o Become aware of the food industry and practice the basics of food safety.
- The course competencies are to:
 - o Evaluate food package label information. Discern the reliability of nutrition information.
 - o Apply dietary patterning techniques to determine the nutritional adequacy of diets. Utilize diet analysis software and food composition information to perform dietary analysis and evaluate diets for nutritional adequacy and chronic disease risk.
 - o Make recommendations for improving dietary intake based on dietary analysis results.
 - o Evaluate laboratory and anthropometrical data in relation to chronic disease risk.
 - o Prevent food borne illness by adopting good food handling techniques.

Course evaluations ensure that the course goals, objectives and competencies are met. In addition, the College of Science Gen Ed committee assesses the course. Students who took the course and faculty who teach the course respond to a survey that solicits their perception of the course meeting the LS Gen Ed course criteria. The data are compared to all courses offered for LS Gen Ed to insure that all courses continue to meet the criteria.

- Student portfolios demonstrate what they can do, what they know (WSU, U of U for grad program).
- Use I-Clickers “test your knowledge” activities during class.
- Passage rates of Registered Dietitian exam (USU).
- Professional research assignment to analyze journal article. Critical Analysis of popular press.
- Assignments including case study analysis.
- Abstract writing in smaller courses.
- Exams in courses (some focus on cognitive learning, some on critical thinking).
- Dietary analysis.

GPA

All schools accept “C” or better for major/minor.

Retention

Enrollment patterns are mostly up or steady; strong retention because of recruiting and advising efforts (both by staff, faculty, and peer advisors). USU realigned Nutrition sciences with pre-med, and enrollment doubled.

Faculty don't seem concerned with failure and see an early failure as an indication of lack of preparedness or inclination towards field. If students do not do well in initial class, they should not continue on to advanced work. When students are encountering this issue, faculty or advisors try to work with them to find alternate major options, rather than having them leaving the institution.

Other

Multicultural Nutrition courses offered across institutions: SUU – SCI 2120 multicultural nutrition – service learning trip to Mexico; WSU NUTR 3420 – multicultural health and nutrition; USU 5830, no prerequisites; U of U – 3000-level Cultural Aspects of Food.

Philosophy (PHIL)

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Articulation

- Philosophy of Religion(s) changed to Philosophy of Religion. New numbering on grid. Philosophy of Religion U of U 3600; USU will change to 3600 (change from 3700). CEU will change 2350. SLCC 2350. UVU 3600
- USU will change 1200 to 1250.
- SLCC will teach 1250 and Human 2300
- U of U 2600 to 3640
- SLCC's 1120 Social Ethics changed to 1130 Personal Ethics because it changed to a Diversity requirement.
- Agreement to accept 1130 Personal Ethics across the board as 1120 Social Ethics

Issues from 2007

An update on the Website with hot buttons was given. Each agreed to develop their own BlogSpot, then later will try to link all of them together. Charlie will send his link usuphilosophy.com.

Essential Learning Outcomes

Assessment strategies used by USU department that fit ELOs, they use a 5 point scale while evaluating 11 ELOs. All of the courses majors and Gen Ed classes cover learning outcomes.

- SLCC gave Student Learning Outcomes
- Acquire substantive knowledge in the discipline of their choice sufficient for further study and think critically.
- Communicate effectively.
- Develop quantitative literacies necessary for their chosen field of study.
- Develop the knowledge and skills to be civically engaged, and/or to work with others in a professional and constructive manner.

GPA

Feel okay with students repeating classes as of now.

Retention

All of these efforts to address retention are good ideas; however it depends on the student you are trying to reach.

- Developing online classes to increase enrollment because of gas prices, people not wanting to travel, and students needing certain credits. Technology used Blackboard, WebCT, etc.
- Advising office contacts philosophy students when they are not doing well.
- Using Facebook accounts to give resources to students (create connection w/ students and advertise).
- Talking with students develop connections with students, letters, notes on papers, emails.
- Arriving to school "Connections" helps students arrive a week or a couple days before school to get comfortable.
- U of U Graduation Guarantee helps students returning to the U of U program.

The group feels that the impact is positive on institutional retention rates, it might retain students to the discipline, and the worst is the student doesn't major in Philosophy. Introductory courses helping with retention.

Other

Undergrad conferences: Spring 09 UVU undergrad conference (in April); fall 09 SLCC undergrad conference; November 7 SLCC conference, "To Kill?"; and Ethics Bowl at WSU on November 15th.

Physics (PHYS)

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Articulation

- PHYS 1010 "Elementary Physics): called "The Way Things Work" at U of U; called "Intro to Physics by Hands-On Exploration" at USU (4 credit hours).
- USU's PHYS 1200 uses the same text as most other 1010 courses; articulation needs to be reviewed – possibly renumbered as 1010.
- PHYS 1070 is only taught at UVU.
- PHYS 1080 "Life in the Universe" available at USU, but not on grid.

- PHYS 1500 "Preparatory Physics" taught at U of U only (may discontinue; encouraged for students who have no physics background).
- PHYS 2110 and 2120: Content not uniform across all schools. U of U's 2110 (for Physics majors only) appears to be higher-level course. Possible renumbering?
- PHYS 1020, 2090, and 1800 are intended to be Gen Ed courses. Consider common number? Perhaps two separate classes (1000- and 2000-levels)?
- U of U offers two 3000-level energy classes with pre-reqs.
- UVU's PHYS 3800 and U of U's PHYS 3150 have similar course content. Should consider common course numbering; however, this is a less urgent issue since they are UD courses.

Issues from 2007

- What is status of 1000-level energy course? Agreed that PHYS 1020 be called "Energy: _____" at all institutions. Will seek for Gen Ed credit.
- PHYS 1030 instead of 1020 for "Meteorology"? To be discussed in the future.
- High school visits
 - o WSU and USU do not do concurrent enrollment.
 - o SLCC working with 5-6 schools.
 - o USU may consider CE for PHYS 1200.
 - o CE teachers are adjunct faculty and need to understand expectations and teach with same level of quality.
 - o Regional campus classes create problems for USU.
 - o U of U is visiting 60 local high schools and 40 in Las Vegas. Lynn Higgs passed out a recruiting DVD.

Consistency in acceptance of AP scores (or not). It was agreed that each institution will send Larry Smith a 3-D table/matrix with AP breakdown, in hopes of creating greater consistency. There is concern that AP teachers teach to the test, not focusing on content. Students come to college without adequate knowledge/application skills. College Board folks are working to correct this problem. Textbook and test have been dummed down.

Essential Learning Outcomes

Is there a distinction between 'physical' and 'natural'? Should there be? It was agreed that the distinction between the two areas should stay.

Inquiry, analysis, information literacy, critical and creative thinking, and integrative learning are inherent in all Physics courses. Quantitative literacy: emphasize ability to estimate scale, depth, impact of a problem, solution; interrelationship (China steel mill case). From a physicist's standpoint, teamwork and problem solving are separate. (Why?)

All energy courses apply to personal and social responsibility. Scientific components in valid arguments can be made pertaining to civic issues, recognizing the impact of science in regional, national and global issues (using science to evaluate constraints on policy). All science deans in Utah are meeting to work on increasing science literacy in the state and adequately train teachers. Physics courses address environmental responsibility and safe lifestyle issues.

Areas for improvement: written and oral communication (not inherent in Gen Ed classes; instructor dependent); intercultural knowledge; and ethical reasoning and action (needs to be articulated better to students).

GPA

Issues related to standardizing acceptable GPAs: Engineering schools will only accept transfer "C" grades (but will accept Gen Ed requisites as met). This information is spelled out in articulation guides and is deemed to be primarily an advisement issue. There was discussion about formulating a matrix or "Get Ready Guide" (U of U's version). This is only a problem if students don't get the information. The key is to know requirements and treat all situations alike.

Retention

Enrollment primarily remains stable. UVU is slowly growing. The U of U is up 15% in large part as a result of a heavy advertising campaign. 50-60% of WSU's majors graduate. BYU and U of U graduate about 40% of their majors.

Continuing efforts to address retention

- There is a need to educate high school counselors to direct more students towards science.
- WSU has had success with "Physics Night."
- U of U holds public lectures; they work primarily with AP teachers, offering students credit for attendance.
- USU has a Physics Bowl with prizes.
- The U of U gets students involved in research and/or undergraduate seminars to build a sense of community.
- USU has good retention efforts with a designated Physics advisor and "Gee Whiz" sessions with faculty.
- WSU and U of U have a "major's room" with lockers, books, tables, chairs, etc.

It is hard to assess first- and second-year students; however, once students get into their UD work, they tend to stay. Is it possible to create a database of Physics graduates? This would serve as a great recruitment and retention tool. Phil Matheson (UVU) will act as repository.

Other

No issues were identified.

Political Science (POLS)

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Articulation

No problems with grid.

The group discussed new courses at SLCC: Peace and Conflict Studies program with two new courses Peace and Conflict; and Domestic and Peace and Conflict. There are new minors at WSU – international politics and public administration. SUU offers certificates in international relations and public administration. For information purposes, the chair asked all departments to list their programs.

Gen Ed POLS 2100 and 2200 are BF at U of U but not at other institutions; POLS 2300 is HF at U of U but BF at SLCC.

Issues from 2007

UVU is still in the process of getting POLS 2350 changed to POLS 2300.

The group raised questions about the consistency in AP. Two levels of question 1) AP Government for AI; 2) AP Government for major. USU and UVU both accept AP US Government for POLS 1100 credit in the major. Should U of U pressure its department to change policies to accept POLS 1100? Other universities felt that U of U should have to change; rather it should be an internal decision within each program. U of U advisor will present information on AP policies to the department chair and faculty for consideration of changes.

The group discussed how to promote and support diverse students. The U of U department provides materials in department office that cover a wide-range of student services and programs.

Essential Learning Outcomes

Michael Petersen from UEN discussed the use of Blackboard/WebCT and learning object repository in conjunction with learning outcomes. Could we develop a set of learning outcomes and then specific learning objects that could be collected in this repository system that could then be used by faculty across universities in their courses? Is their interest in doing this particularly for POLS 1100, to seek funding and organize group of faculty to put these object materials together? Questions were raised about what exactly a "learning object" would be – would these be standards that would dictate course content? Michael's response – not really; idea would be to collect and produce a set of materials that cover typical topics and would be available as tools for faculty to use. Questions were raised about whether this would be a unique contribution – don't publishers and others provide these kinds of resources? – and whether trying to put this together would be feasible (in terms of time, resources, etc) and worth the expense of time/money. There was interest among the group in using such a resource. However, the group questioned who would be involved in its production. It was mentioned that this could be of particular value for adjuncts, who may not have as many resources or time to gather materials to improve their courses. For faculty who might be interested in participating, write Mike at mpetersen@media.utah.edu.

What institutions have identified or are in the process of identifying learning outcomes? SLCC and WSU have done it; DSC is in process. The meeting chair asked other university representatives to continue working on this and we would all communicate over email to refine and further develop ideas about ELOs and assessments. Concerns were raised about how consistent assessments need to be across universities.

The group questioned which of the stated ELOs does our discipline not address? Two levels 1) which ELOs don't seem to fit the discipline; 2) which ELOs would be difficult to measure/assess? (For example, how do we assess "ethical reasoning" as an objective?) Discussion developed around questions about what exactly counts as "assessment." Those who had been involved in the process explained options that have been implemented pre- and post-tests that focus on one ELO in particular semester or class; field exams; content analysis of papers; etc.

- Teamwork – discussion centered on what counts – group projects? Small group discussion? Does it occur enough in certain classes to be considered important for discipline as a whole?
- Foundations and skills for lifelong learning – how would you measure? Suggestions included alumni surveys. But is this an important/valuable outcome that can be meaningfully assessed? Seems that "skills" are already represented by the other ELOs, making this ELO redundant (and the "lifelong learning" piece would be nearly impossible to measure).
- Problem-solving – is this something distinct from critical and creative thinking?

Each representative will email Laurie with their assessment of ELOs; Laurie and Jess will compile responses and communicate with group to move forward towards agreement.

GPA

The group held a brief discussion of grade requirements for the major. It was made clear that there is no discrimination between transfers and institution – grade requirements are standard across students. Representatives from two-year schools emphasized the need to make sure that all requirements for majors (including GPAs and course grades) at four-year schools are well-publicized and made clear to potential transfers. Most universities require "C-" or better in introductory courses. WSU requires a "C."

Retention

Efforts to address retention and "at-risk" students: some universities require mid-terms grades to be reported, and have advisors contact those students who are at risk of failing to provide resources and advice. Outreach to students

is provided through organizations like Pi Sigma Alpha and Student Advisory Committees. Another important retention factor is improving student access to faculty. Students can access other departmental organizations, common areas/lounges for majors, events, etc – things that create collegiality and feelings of community within departments.

“Alternative” classes, such as online, can be tools for retention. The group discussed positives and negatives of online classes. Online classes may appeal to students who have difficulty getting to campus. There are perceptions, or misperceptions, that online classes are less time-consuming or challenging than regular classes. The group also discussed night and weekend courses. The group agreed that flexible scheduling can be useful in retaining students.

Other

No issues were identified.

Psychology (PSY)

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Articulation

Changes were made on the grid and inconsistencies identified. The only issue in numbers not aligning was with Human Development across the Life Span (PSY 1100). All Institutions that offer this course within a Psychology Department do so with the 1100 number. The U of U, WSU and Snow offer the course in the Family and Consumer Sciences Department and do so with a 1500 number. Snow will offer an 1100 PSY course so their HFST 1500 can be replaced with PSY 1100.

The group agreed that when courses are offered outside a Psychology department, Psychology faculty have no power to change or align course numbers and are, in fact, constrained.

PSY 2010 needs to be added to the matrix. This is a Science and Professional course that is offered at WSU, U of U, SUU, and SUU. Snow and SLCC are looking at adding it for the upcoming year. Check catalogues for 2009 meeting.

Issues from 2007

The group discussed (a) if abnormal and social psychology should be taught at the 3000-level, and (b) how transfer students are handled who take these at the 2000-level. SLCC is the only institution that has 2000-level abnormal and social psychology courses. The other institutions expressed that they need to not offer it anymore because students have to re-take the course at the 3000-level if they transfer. The discussion may be less about what SLCC does and more about ensuring that the 2000-level version of these courses are not redundant in depth and workload. This also affects other departments that require these courses at the 3000-level (e.g. Nursing).

The question “What introductory course would benefit lower-division students” was raised. Many institutions already have such a course in place (PSY 2010) or a career exploration course (PSY 2950). Courses such as Psychology of Adjustment (WSU PSY 1540) and Interpersonal Relationships (WSU PSY 2000) could be offered at SLCC and transferred to other USHE institutions.

Essential Learning Outcomes

Most core courses in Psychology cover knowledge of human cultures and the physical and natural world and intellectual and practical skills. Additionally, APA (American Psychological Association) has standards that closely

match those areas. History and Systems and Capstone/Seminars Courses cover integrative learning. More work needs to be done on how particular courses or course aspects match personal and social responsibility. The U of U's field experience course and its service learning modes combine Psychology content with community placements.

GPA

The group discussed the issue of requiring course repeats and those related to standardizing acceptable GPAs.

Faculty reported that they did not have different GPA requirements for transfer students and native students. Most require a "C-" or "C" (U of U and WSU) or better although there was some variation among the departments.

Retention

The group discussed enrollment patterns, continuing efforts to address retention, how this discipline impacts institutional retention and typical failure rates and how to address them. U of U is losing numbers in 1010. WSU is working on showing students what a degree in Psychology can provide in order to attract and keep more students. USU is asked to put a statement about "retention and early learning" in their syllabus.

Other

No issues were identified.

Social Work (SW)

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Mark Bigler	WSU	mbigler@weber.edu			

Articulation

There were no changes made to the grid nor were any inconsistencies noted.

Issues from 2007

Attendees did not believe there was an issue or question regarding adding a lower-division values course. Values content is required in existing courses in all programs.

Improving writing skills at the lower-division elicited many suggestions. They included (a) better junior high school preparation of students before they ever come to the university; (b) improving the quality of training in writing given by university English or writing programs; (c) creating an writing course within the Social Work program; (d) mentoring students with identified writing problems.

Essential Learning Outcomes

The Council on Social Work Education's recently adopted competency requirements which apply to all accredited baccalaureate and master's programs and covered many of the same learning outcomes identified in the AAC&U document. Grafton offered to prepare a matrix that showed the relationship between these competencies and those from the AAC&U document. This will be shared with attendees who will identify which of their courses contribute to the learning outcomes. The final document will be sent to Teddi.

Assessment strategies used by Social Work were identified although they varied by school. They included use of graduation examinations, capstone papers, self-evaluations by students, participation in the Baccalaureate Educational Assessment Project (BEAP) which includes exit surveys, alumni surveys, employer surveys, and soon a knowledge test that can be used as a pre-post measure of change in students, field supervisor evaluations during practicum, and a knowledge test used at both program admission and admission to the practicum.

CSWE Required Competencies	Corresponding LEAP ELOs
2.1.1 – Identify as a professional social worker and conduct oneself accordingly: advocate for client access to social work services; practice personal reflection and self-correction to assure continual professional development; attend to professional roles and boundaries; demonstrate professional demeanor in behavior, appearance, & communication; engage in career-long learning; use supervision and consultation	Foundations & skills for lifelong learning
2.1.2 – Apply social work ethical principles to guide professional practice: recognize/manage personal values, allowing professional values to guide practice; make ethical decisions by applying the NASW Code of Ethics and, if applicable, other recognized ethical principles; tolerate ambiguity in resolving ethical conflicts; apply ethical reasoning strategies to arrive at principled decisions	Ethical reasoning & action
2.1.3 – Apply critical thinking to inform and communicate professional judgments: distinguish, appraise, and integrate multiple sources of knowledge, including research-based knowledge, and practice wisdom; analyze models of assessment, prevention, intervention, and evaluation; demonstrate effective oral and written communication in working with individuals, families, groups, organizations, communities, and colleagues	Critical & creative thinking; Inquiry & analysis; Synthesis & advanced accomplishment across general & specialized studies; Written & oral communication
2.1.4 – Engage diversity and difference in practice: recognize the extent to which a culture's structures and values may oppress, marginalize, alienate, or create or enhance privilege and power; gain sufficient self-awareness to eliminate the influence of personal biases and values in working with diverse groups; recognize and communicate understanding of the importance of difference in shaping life experiences; view selves as learners and engage those with whom they work as informants	Knowledge of human cultures & the physical & natural world; Interpersonal knowledge & competence
2.1.5 – Advance human rights and social and economic justice: understand the forms and mechanisms of oppression and discrimination; advocate for human rights and social and economic justice; engage in practices that advance social and economic justice	
2.1.6 – Engage in research-informed practice and practice-informed research: use practice experience to inform scientific inquiry; use research evidence to inform practice	Quantitative literacy, Information literacy
2.1.7 – Apply knowledge of human behavior and the social environment: utilize conceptual frameworks to guide the processes of assessment, intervention, and evaluation; critique and apply knowledge to understand person and environment	Knowledge of human cultures & the physical & natural world; Intercultural knowledge & competence
2.1.8 – Engage in policy practice to advance social and economic well-being and to deliver effective social work services: analyze, formulate, and advocate for policies that advance social well-being; collaborate with colleagues & clients for effective policy action	Teamwork & problem solving
2.1.9 – Respond to contexts that shape practice: continuously discover, appraise, and attend to changing locales, populations, scientific and technological developments, and emerging societal trends to provide relevant services; provide leadership in promoting sustainable changes in service delivery and practice to improve the quality of social services	Civic knowledge & engagement–local & global
2.1.10(a)–(d) – Engage, assess, intervene, and evaluate with individuals, families, groups, organizations, and communities: substantively and affectively prepare for action with individuals, families, groups, organizations, and communities; use empathy and other interpersonal skills; develop a mutually agreed-on focus of work and desired outcomes; collect, organize, and interpret client data; assess client strengths and limitations; develop mutually agreed-on intervention goals and objectives; select appropriate intervention strategies; initiate actions to achieve organizational goals; implement prevention interventions that enhance client capacities; help clients resolve problems; negotiate, mediate, and advocate for clients; facilitate transitions and endings; critically analyze, monitor, and evaluate interventions	

GPA

Lower-division GPA from Gen Ed courses is not an issue for Social Work.

Retention

The group identified no significant problems within any of the Social Work programs. Admissions numbers were stable and students who are admitted to the programs seem to finish successfully. It was estimated that students who do not complete the major once admitted range from no more than 2% to a high of 10%. However, some of those who did not graduate were dismissed from the program for violations involving behavior, unprofessional acts, or academic failure. Since programs are charged with gate keeping for the profession, such losses were considered desirable or necessary. Generally speaking, retention in Social Work is better than for the university as a whole.

Other

No issues were identified.

Sociology (SOC)

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Articulation

The course grid was sent around, people made changes, and the grid was submitted at the end of the meeting.

Gender Studies (SUU) wants to change the title and make it a 3000-level course; UVU wants to re-title it, but 2370 is the common number for Gender Studies. The trend has been to move it to upper-division which creates a problem at 2-year schools; there are not enough lower-division courses to get students interested in Sociology. SLCC, UVU and SUU will coordinate the title. CEU calls theirs SOC 2910. Faculty asked if this can be changed.

Faculty did not know that there is a CLEP Test for SOC 1010. The group discussed whether or not to accept it, and, if so, what score cutoff is acceptable. Faculty agreed that it is school prerogative to accept or not. WSU will send to everyone a rationale on why they don't accept it. Currently, WSU faculty do not know the content of the tests.

Issues from 2007

People who mentioned the issues on the agenda aren't here this year.

Essential Learning Outcomes

Faculty determined that they do not need to have every outcome. Sociology is based on the ability of people to make a distinction between personal troubles and public issues, what C Wright Mills called "the sociological imagination."

Sociology covers knowledge of human cultures. Sociology covers intellectual and practical skills, though teamwork in larger courses is more difficult. The USOE representative indicated that grades 3-6 follow what is on the blue paper and call it Essential Enduring Understandings. Personal and social responsibility is the nature of the discipline; ethical reasoning and action through research and lifelong learning is in all courses.

We will need to show that students have learned what we said they would learn. WSU assesses integrative learning by embedding 5 common questions in exams across the board. The score is averaged and sent to Gen Ed. A pre and post test of Sociological Theory is given. SLCC and DSC do pre and post testing. UVU has students display their work at the end of the semester. USU's assessments are specific to courses – see their website under Assessment on the right side. WSU does exit interviews for the major and asks how much have you improved in (5 skills)?

GPA

Majors require a "C" or better in major courses. Should Soc Gen Ed courses have a grade requirement?

Retention

- WSU has a Sociology club and in 1010 courses, faculty discuss what students can do with a Sociology degree, including jobs to get students interested.
- SUU is a member of the United Chapter of Alpha Kappa Delta (AKD), the international Sociology Honor Society. This club serves as a platform to enhance students' academic goals, knowledge, and extracurricular activities. SUU also has "What can I do with a Sociology Major?" information. Faculty discuss and distribute to individuals and classes pamphlets that explain job and career opportunities.
- SLCC has a handout it gives at the end of the semester discussing the degree and jobs; their enrollments have tripled. For example, if students were interested in chapter 3 the next class on that is ____ or if they liked chapter 6 the next class on that topic is ____.

- UVU has a behavioral science orientation course that helps students learn about the department, the professors, the courses, and career opportunities with a degree in behavioral science.

There is no extra funding for additional faculty, no reward. USU has great teachers. Upper-division courses are capped at 60 students. USU has many students and courses in demand. When more students show up in classes, the department is penalized because there is no way to add classes. Instead, they keep getting larger even though they try to cap upper-division courses at 60 students.

Mostly Sociology retains the unconventional students. Many students who believe they aren't good at anything find they are good at something, Sociology.

Other

The group will discuss a diversity course next year. Definitions of diversity are different at each school. Some schools have embedded it in Gen Ed and some have it as a graduation requirement.

Theatre (THEA)

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Articulation

- THEA 1113 Voice and Diction - Not taught at U of U or Snow. Voice and Diction taught at SLCC as FILM 1110 – Faculty are working to get it cross – listed under Theatre as THEA 1113.
- WSU has 1030 Voice and Movement – Students transferring in will be evaluated individually. Students transferring in with courses in either Movement or Voice and Diction will receive credit for WSU's course.
- THEA 2033 Acting II - USU has had a different course numbering scheme. They are going to renumber.
- Theatre history course numbers differ. Not all Theatre history courses were listed on the grid.
- DSC, UVU, and USU offer Musical Theatre courses not listed on the grid (course numbers differ.)

Issues from 2007

No issues were identified.

Essential Learning Outcomes

There is a difference between what is critical and what is desirable. We often are doing the right assessment activities, but don't articulate that we are. We need to justify ourselves. Either we define learning outcomes as Theatre faculty or others (elected public officials) will define them for us. Accountability!

Students will be able to identify the function of the arts in society. Do we want to change stated outcomes? It's an ongoing discussion. Why reinvent the wheel? Look at other consortia and collaborative Theatre groups as examples.

The following help meet the knowledge of human cultures and the physical world ELOs: Intro to Theatre; themes of plays performed or studied in various classes; performing a part – mimesis – personal engagement in lives of others; Black theatre; American political theatre; gay and lesbian theatre; dialect work; and primary and biographical research.

Intellectual and practical skills are increased through communication, collaboration, and research.

Personal and social responsibility is increased through service learning – SUU Shakespeare competition; discussing issues in talkback sessions after shows – guest expert speakers; taking shows to public to educate; and organization, self-discipline, deadlines, collaboration.

Integrative learning is met through senior projects/capstone experiences – developing new materials; research; NYC auditions for acting students/professional showcase; freshman and junior seminars – start students on portfolio building; touring; design, direct, choreograph; ACTF; and prep for auditions, grad school, interviews/applications, internships, juries.

GPA

SUU – minimum GPA 3.0 for BFA. Most others 2.0; USU is 2.6.

Gen Ed Classes: All offer intro/survey of Theatre. Some offer acting, political theatre, black theatre, gay and lesbian theatre. WSU offers Introduction to Acting and Introduction to Film as Gen Ed.

Retention

- Helps:
 - o Personal touch is #1.
 - o 25% are transfer students. 87% majors at U of U were Utah residents – similar for others.
 - o Mentoring and creation of a home!!! Advisors who understand the discipline.
 - o Tuition waivers/scholarships. Work-study jobs.
 - o Academic problems hinder – especially for open admissions campuses.
 - o Pros and cons depending on when/how auditions are set up and shows are selected.
 - o Student organizations – Theatre Arts Guild through university student government.
 - o Creating a sense of community – barbecues, etc. General meeting/town meeting for majors each semester.
 - o Brown bag meeting after show opens.
 - o Food! (Cast parties).
- Hindrances:
 - o Lack of money – scholarships, jobs.
 - o SCH (student credit hour) model of funding – difficult for the U of U.

Other

Measurement of success: Reviews, feedback, responses from employers for interns, the Kennedy Center American College Theatre Festival (KCACTF), admissions to grad schools, who hires the graduates, applause!

BS versus BA versus BFA: which schools offer what and why? WSU offers the BS and BA in Theatre. NAST Certification – U of U is in the process.

Common Course Numbers and Prefixes 2009

Major	CCP	CCN	2008 Generic Course Title	UU P	UU N	USU P	USU N	WSU P	WSU N	SUU P	SUU N	Snow P	Snow N	DSC P	DSC N	CEU P	CEU N	UVU P	UVU N	SLCC P	SLCC N	
Anthropology	ANTH	1000	Introduction to Anthropology	ANTH	1000			ANTH	1000			ANTH	1000	ANTH	1000							
Anthropology	ANTH	1010	Cultural Anthropology	ANTH	1010	ANTH	1010	Upper	Div	ANTH	1010					ANTH	1010	ANTH	1010	ANTH	1010	
Anthropology	ANTH	1020	Biological Anthropology	ANTH	1020	ANTH	1020	ANTH	1020	ANTH	1020					ANTH	1020	ANTH	1020	ANTH	1020	
Anthropology	ANTH	1030	World Pre-History	ANTH	1030			Upper	Div							ANTH	1030	ANTH	1030	ANTH	1030	
Anthropology	ANTH	1040	Language and Culture					ANTH	1040	ANTH	1040							ANTH	3000			
Anthropology	ANTH	1050	Evolutionary Anthropology	ANTH	1050																	
Anthropology	ANTH	1060	Applied Anthropology							ANTH	1060											
Anthropology	ANTH	2010	Peoples and Culture			ANTH	2010	ANTH	2010													
Anthropology	ANTH	2011	People of the Southwest													ANTH	2011			ANTH	2011	
Anthropology	ANTH	2020	Biological Anth. Adv. (ex.: Human Evolution)	ANTH	2020																	
Anthropology	ANTH	2030	Archeology	ANTH	2030	ANTH	2030	ANTH	2030	ANTH	2030					ANTH	2030	ANTH	2030			
Anthropology	ANTH	2040	Linguistics Advanced																			
Anthropology	ANTH	2050	Evolutional Ecology Advanced																			
Art	ART	1010	Introduction to Visual Arts	ART	1010	ART	1010	ART	1010	ART	1010	ART	1010	ART	1010	ART	1010	ART	1010	ART	1010	
Art	ART	1020	Basic Drawing (non-majors)	ART	1020	ART	1020					ART	1020	ART	1110			ART	1110	ART	1020	
Art	ART	1050	Photography (non-majors)	ART	1050	ART	1050			ART	1050	ART	1050	ART	1050	ART	1500	ART	1050	ART	1050	
Art	ART	1110	Drawing I			ART	1110	ART	1110	ART	1110	ART	1110	ART	1110	ART	1110	ART	1110	ART	1110	
Art	ART	1120	2D Design			ART	1120	ART	1120	ART	1120	ART	1120	ART	1120	ART	1120	ART	1120	ART	1120	
Art	ART	1130	3D Design			ART	1130	ART	1130	ART	1130	ART	1130	ART	1130	ART	1130	ART	1130	ART	1130	
Art	ART	2110	Drawing II			ART	2110			ART	2110	ART	2110	ART	2110	ART	2110	ART	2110	ART	2110	
Art History	ARTH	2500	Intro to Art History																			
Art History	ARTH	2710	Art History Survey I			ARTH	2710	ARTH	1090	ARTH	2710	ARTH	2710	ARTH	2710			ARTH	2710	ARTH	2710	
Art History	ARTH	2710	Art History Survey I																			
Art History	ARTH	2720	Art History Survey II			ARTH	2720	ARTH	1100	ARTH	2720	ARTH	2720	ARTH	2720			ARTH	2720	ARTH	2720	
Biology	BIOL	1010	General/Introduction to Biology	BIOL	1010	BIOL	1010	ZOOL	1020	BIOL	1010	BIOL	1010	BIOL	1010	BIOL	1010	BIOL	1010	BIOL	1010	
Biology	BIOL	1610	Biology I (for majors)	BIOL	1210	BIOL	1610	ZOOL	1110	BIOL	1610	BIOL	1610	BIOL	1610	BIOL	1610	BIOL	1610	BIOL	1610	
Biology	BIOL	1615	Biology Lab							BIOL	1615	BIOL	1615	BIOL	1615	BIOL	1615	BIOL	1615	BIOL	1615	
Biology	BIOL	1620	Biology II (for majors)			BIOL	1620	ZOOL	1120	BIOL	1620	BIOL	1620	BIOL	1620	BIOL	1620	BIOL	1620	BIOL	1620	
Biology	BIOL	1625	Biology II Lab							BIOL	1625	BIOL	1625	BIOL	1625	BIOL	1625	BIOL	1625	BIOL	1625	
Biology	BIOL	2020	Cell	BIOL	2020																BIOL	2020
Biology	BIOL	2030	Genetics (for majors)	BIOL	2030							BIOL	2030	BIOL	2030	BIOL	2030				BIOL	2030
Biology	BIOL	2035	Genetics Lab									BIOL	2035			BIOL	2035				BIOL	2035
Biology	BIOL	2060	General Microbiology			BIOL	2060	MICR	2054	BIOL	2060	BIOL	2060	BIOL	3450	BIOL	2060	Upper	Div		BIOL	2060
Biology	BIOL	2065	General Microbiology Lab							BIOL	2065	BIOL	2065	BIOL	3455	BIOL	2065				BIOL	2065
Biology	BIOL	2220	Ecology			BIOL	2220			Upper	Div	BIOL	2220	BIOL	2220	BIOL	2220				BIOL	2220
Biology	BIOL	2225	Ecology Lab							Upper	Div	BIOL	2225	BIOL	2225	BIOL	2225				BIOL	2225
Biology	BIOL	2320	Human Anatomy	BIOL	2325	BIOL	2320	ZOOL	2100	BIOL	2320	BIOL	2320	BIOL	2320	BIOL	2320	ZOOL	2320		BIOL	2320
Biology	BIOL	2325	Human Anatomy Lab	BIOL	2325					BIOL	2325	BIOL	2325	BIOL	2325	BIOL	2325				BIOL	2325
Biology	BIOL	2420	Human Physiology	BIOL	2420	BIOL	2420	ZOOL	2200	BIOL	2420	BIOL	2420	BIOL	2420	BIOL	2420	ZOOL	2420		BIOL	2420
Biology	BIOL	2425	Human Physiology Lab							BIOL	2425	BIOL	2425	BIOL	2425	BIOL	2425				BIOL	2425
Biology	BIOL	3060	Genetics (for majors)			BIOL	3060	ZOOL	3300	BIOL	3060											
Biology	BIOL	3065	Genetics Lab			BIOL	3065			BIOL	3065											
Business	?	1100	Business Calculus	MATH	1100	MATH	1100			MATH	1100	MATH	1100	MATH	1100	MATH	1100	MATH	1100			
Business	?	1100	Business Calculus in Business Schools					QUAN	T	2400											BUS	1100

Major	CCP	CCN	2008 Generic Course Title	UU P	UU N	USU P	USU N	WSU P	WSU N	SUU P	SUU N	Snow P	Snow N	DSC P	DSC N	CEU P	CEU N	UVU P	UVU N	SLCC P	SLCC N
Business	?	2010	Financial Accounting	ACCT G	2010	ACCT	2010	ACTG	2010	ACCT	2010	ACCT	2010	ACCT	2010	ACCT	2010	ACC	2010	ACCT	2010
Business	?	2010	Business Computers/Applications	IS	2010			ISIT	2010			CIS	2010	CIS	2010	BCIS	2010	DGM	2010	CIS	2010
Business	?	2020	Managerial Accounting	ACCT G	2020	ACCT	2020	ACTG	2020	ACCT	2020	ACCT	2020	ACCT	2020	ACCT	2020	ACC	2020	ACCT	2020
Business	?	2040	Business Statistics (4 credits)			STAT	2300			MATH	2040	MATH	2040	STAT	2040	MATH	2040				
Business	?	2050	Business Law	Upper	Div	MHR	2050	Upper	Div	ACCT	3350	BMGT	2050	MGMT	2050	BUSN	2050	Upper	Div	MGT	2050
Business	?	2200	Business Communications			BIS	2200			ENGL	2040	BUED	2200					MGMT	2200	BUS	2200
Business	?	2340	Business Statistics I (3 credits)	MGT	2340			QUAN T	2600									MGMT	2340	MGT	2040
Business	?	2350	Business Statistics II (3 credits)	Upper	Div			Upper	Div											MGT	2350
Business	?	?	Foundations of Business	BUS	1050			BSAD	1010	BA	1010	BMGT	1010	BUS	1010	BUSN	1010	MGMT	1010	BUS	1050
Business Computers	?	2010	Business Computers/Applications	IS	2010			ISIT	2010	CSIS	2010	CIS	2010	CIS	2010	BCIS	2010	DGM	2010	CIS	2010
Chemistry	CHEM	1010	Introductory Chemistry	CHEM	1010	CHEM	1010	CHEM	1010	CHEM	1010	CHEM	1010	CHEM	1010	CHEM	1010	CHEM	1010	CHEM	1010
Chemistry	CHEM	1015	Introductory Chemistry Lab							CHEM	1015	CHEM	1015			CHEM	1015				
Chemistry	CHEM	1110	Elementary Chemistry	CHEM	1110	CHEM	1110	CHEM	1110	CHEM	1110	CHEM	1110	CHEM	1110	CHEM	1110	CHEM	1110	CHEM	1110
Chemistry	CHEM	1115	Elementary Chemistry Lab			CHEM	1115	CHEM	1115	CHEM	1115	CHEM	1115	CHEM	1115	CHEM	1115	CHEM	1115	CHEM	1115
Chemistry	CHEM	1120	Elementary Organic Bio-Chemistry	CHEM	1120	CHEM	1120	CHEM	1120	CHEM	1120	CHEM	1120	CHEM	1120	CHEM	1120	CHEM	1120	CHEM	1120
Chemistry	CHEM	1125	Elementary Organic Bio-Chemistry Lab					CHEM	1125	CHEM	1125	CHEM	1125	CHEM	1125	CHEM	1125	CHEM	1125	CHEM	1125
Chemistry	CHEM	1210	Principles of Chemistry I	CHEM	1210	CHEM	1210	CHEM	1210	CHEM	1210	CHEM	1210	CHEM	1210	CHEM	1210	CHEM	1210	CHEM	1210
Chemistry	CHEM	1215	Principles of Chemistry I Lab	CHEM	1215	CHEM	1215	CHEM	1215	CHEM	1215	CHEM	1215	CHEM	1215	CHEM	1215	CHEM	1215	CHEM	1215
Chemistry	CHEM	1220	Principles of Chemistry II	CHEM	1220	CHEM	1220	CHEM	1220	CHEM	1220	CHEM	1220	CHEM	1220	CHEM	1220	CHEM	1220	CHEM	1220
Chemistry	CHEM	1225	Principles of Chemistry II Lab	CHEM	1225	CHEM	1225	CHEM	1225	CHEM	1225	CHEM	1225	CHEM	1225	CHEM	1225	CHEM	1225	CHEM	1225
Chemistry	CHEM	2310	Organic Chemistry I	CHEM	2310	CHEM	2310	CHEM	2310	CHEM	2310	CHEM	2310	CHEM	2310	CHEM	2310	CHEM	2310	CHEM	2310
Chemistry	CHEM	2315	Organic Chemistry I Lab	CHEM	2315	CHEM	2315	CHEM	2315			CHEM	2315	CHEM	2315	CHEM	2315	CHEM	2315	CHEM	2315
Chemistry	CHEM	2320	Organic Chemistry II	CHEM	2320	CHEM	2320	CHEM	2320	CHEM	2320	CHEM	2320	CHEM	2320	CHEM	2320	CHEM	2320	CHEM	2320
Chemistry	CHEM	2325	Organic Chemistry II Lab	CHEM	2325	CHEM	2325	CHEM	2325	CHEM	2325	CHEM	2325	CHEM	2325	CHEM	2325	CHEM	2325	CHEM	2325
Chemistry	CHEM	3000	Quantitative Analysis	CHEM	3000	CHEM	3000	CHEM	3000	CHEM	3000							CHEM	3000		
Chemistry	CHEM	3005	Quantitative Analysis Lab			CHEM	3005														
Communication	COMM	1010	Introduction to Communications	COMM	1010					COMM	1010			COMM	1010					COMM	1010
Communication	COMM	1020	Public Speaking	COMM	1020	SPCH	1020	COMM	1020			COMM	1020	COMM	1020	COMM	1020	COMM	1020	COMM	1020
Communication	COMM	1050	Human Communications											COMM	1050					COMM	1050
Communication	COMM	1080	Conflict Management																	COMM	1080
Communication	COMM	1130	Media Writing			JCOM	1130	COMM	1130			COMM	1130	COMM	1130	COMM	1040 1050	COMM	1130	COMM	1130
Communication	COMM	1270	Analysis of Argumentation	COMM	1270					COMM	1310			COMM	1270	COMM	1270			COMM	1270
Communication	COMM	1500	Introduction to Mass Media	COMM	1500	JCOM	1500	COMM	1500			COMM	1500	COMM	1500	COMM	1500	COMM	1500	COMM	1500
Communication	COMM	1515	Basic Audio Production																	COMM	1515
Communication	COMM	1560	Broadcast Production (Audio)					COMM	1560	COMM	1560	COMM	1560			COMM	1560			COMM	1560
Communication	COMM	1610	News Writing	COMM	1610			Upper	Div	COMM	1610			COMM	1610	COMM	1610	COMM	1610	COMM	1610
Communication	COMM	2010	Mass Communication and Society			JCOM	2010	COMM	2010	COMM	2010							COMM	2010		
Communication	COMM	2110	Interpersonal Communication	COMM	2110	SPCH	2110	COMM	2110	COMM	2110	COMM	2110	COMM	2110	COMM	2110	COMM	2110	COMM	2110
Communication	COMM	2120	Small Group	COMM	2120	Upper	Div			COMM	2120			COMM	2120	COMM	2120	COMM	2120	COMM	1120
Communication	COMM	2150	Intercultural Communication			Upper	Div	Upper	Div	COMM	2150					COMM	2150			COMM	2150
Communication	COMM	2200	Broadcast Production (T.V.)					COMM	2200	COMM	2200	COMM	2200	COMM	1380	COMM	2200	COMM	2700	COMM	2200
Communication	COMM	2270	Argumentation and Debate			SPCH	2270	COMM	2270	COMM	2270	COMM	2270	COMM	1270			COMM	2270		
Communication	COMM	2300	Introduction to Public Relations			JCOM	2300	Upper	Div	COMM	2300	COMM	2300					COMM	2300	COMM	2300
Communication	COMM	2560	Advanced Radio					Upper	Div					COMM	2560	COMM	2560	COMM	2560	COMM	2560

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Computer Science	CS	1030	Foundations of Computer Science					CS	1030			CS	1030			CS	1030	CS	1030		
Computer Science	CS	1035	Foundations of Computer Science Lab																		
Computer Science	CS	1400	Fundamentals of Programming			CS	1400	CS	1400	CSIS	1400	CS	1400	CS	1400	CS	1400	CS	1400	CS	1400
Computer Science	CS	1405	Fundamentals of Programming Lab			CS	1405					CS	1405			CS	1405				
Computer Science	CS	1410	Object-Oriented Programming	CS	1410	CS	1410	CS	1410	CSIS	1410	CS	1410	CS	1410	CS	1410	CS	1410	CS	1410
Computer Science	CS	1415	Object-Oriented Programming Lab									CS	1415								
Computer Science	CS	2420	Introduction to Algorithms & Data Structures	CS	2420	CS	2420	CS	2420	CSIS	2420	CS	2420	CS	2420	CS	2420	CS	2420	CS	2420
Computer Science	CS	2425	Introduction to Algorithms & Data Structures Lab																		
Computer Science	CS	2450	Software Engineering			CS	2450	CS	2450			CS	2450	CS	2450	CS	2450	CS	2450	CS	2450
Computer Science	CS	2455	Software Engineering Lab																		
Computer Science	CS	2705	Digital Design Lab																	CS	2705
Computer Science	CS	2810	Computer Organization & Architecture	Upper	Div	CS	2810	CS	2650	CSIS	2810	CS	2810	CS	2810			CS	2810	CS	2810
Computer Science	CS	2815	Computer Organization & Architecture Lab																		
Criminal Justice	CJ	1010	Introduction to Criminal Justice					CJ	1010	CJ	1010	CJ	1010	CJ	1010	CJ	1010	CJ	1010	CJ	1010
Criminal Justice	CJ	1300	Introduction to Corrections					CJ	1300	CJ	1300	CJ	1300	CJ	1300	CJ	1300	CJ	1300	CJ	1300
Criminal Justice	CJ	1330	Criminal Law					CJ	1330	CJ	1330	CJ	1330	CJ	1330	CJ	1330	CJ	1330	CJ	1330
Criminal Justice	CJ	1340	Criminal Investigation					CJ	1340	CJ	1340	CJ	1340	CJ	1340	CJ	1340	CJ	1340	CJ	1340
Criminal Justice	CJ	1350	Introduction to Forensic Science					CJ	1350	CJ	1350	CJ	1350			CJ	1350	CJ	1350	CJ	1350
Criminal Justice	CJ	2020	Criminal Justice Supervision											CJ	2020					CJ	2020
Criminal Justice	CJ	2110	Security					CJ	2110	CJ	2110	CJ	2110			CJ	2110	CJ	2110	CJ	2110
Criminal Justice	CJ	2330	Juvenile Justice					CJ	2330	CJ	2330	CJ	2330	CJ	2330	CJ	2330	CJ	2330	CJ	2330
Criminal Justice	CJ	2340	Survey of Criminal Procedure							Upper	Div					CJ	2340				
Criminal Justice	CJ	2350	Laws of Evidence					CJ	2350	CJ	2350	CJ	2350	CJ	2350	CJ	2350	CJ	2350	CJ	2350
Criminal Justice	CJ	2360	Juvenile Law and Procedures					CJ	2360					CJ	2360	CJ	2360				
Dance	DANC	1010	Dance in Culture	DANC	1010			DANC	1010	DANC	1010			DANC	1010	DANC	1010	DANC	1010	DANC	1010
Dance	DANC	1075	Dance Appreciation	DANC	1075					DANC	1075	DANC	1075								
Dance	DANC	1100	Ballet I	BALLE	1190			DANC	1100	DANC	1100	DANC	1100	DANC	1100	DANC	1100	DANC	1100	DANC	1100
Dance	DANC	1170	Social Dance			PE	1720			DANC	1170	DANC	1170	DANC	1170	DANC	1170				
Dance	DANC	1200	Modern Dance I	DANC	1200	PE	1701	DANC	1200	DANC	1200	DANC	1200	DANC	1200	DANC	1200	DANC	1200	DANC	1200
Dance	DANC	1500	Jazz Dance I	BALLE	1350	PE	1760	DANC	1500	DANC	1500	DANC	1500	DANC	1500	DANC	1500	DANC	1500	DANC	1500
Dance	DANC	1510	Jazz Dance II					DANC	2480	DANC	2090	DANC	1510					DANC	1510	DANC	1510
Dance	DANC	1520	Folk/Cultural Dance	ESSF	1730			DANC	1520	DANC	1520			DANC	1520	DANC	1520	DANC	1520	DANC	1520
Dance	DANC	1580	Tap I	ESSF	1620			DANC	1580	DANC	1580	DANC	1580			DANC	1580	DANC	1580	DANC	1580
Dance	DANC	1590	Tap II	ESSF	1621					DANC	2120	DANC	1590							DANC	1590
Early Childhood Development	?	1400	Courtship and Marriage					CHF	1400			HFST	1400					ECFS	1400		
Early Childhood Development	?	1500	Human Development Across Lifespan	FCS	1500	FCHD	1500	CHF	1500	FLHD	1500	HFST	1500	FCS	1500	FAML	1500	PSY	1100	FHS	1500
Early Childhood Development	?	2400	Marriage and Family Relations	FCS	2400	FCHD	2400	CHF	2400	FLHD	2400	HFST	2400	FCS	2400	FAML	2400	ECFS	2400	FHS	2400
Early Childhood Development	?	2500	Child Development: Birth to Eight	Upper	Div	Upper	Div	CHF	2500			HFST	2500	FCS	2500	FAML	2500	EDEC	2500	FHS	2500
Early Childhood Development	?	2600	Introduction to Early Childhood Education			FCHD	2600	CHF	2600			HFST	2600	FCS	2600	FAML	2600	EDEC	2600	FHS	2600
Early Childhood Development	?	2610	Guidance	FCS	2610	FCHD	2610	CHF	2610	FLHD	2610	HFST	2610	FCS	2610	FAML	2610	EDEC	2610	FHS	2610
Early Childhood Development	?	2620	Creative Play	FCS	2620			CHF	2620	Upper	Div	HFST	2620	FCS	2620	FAML	2620	EDEC	2620	FHS	2620
Early Childhood Development	?	2640	Working with Parents	Upper	Div			Upper	Div					FCS	2640					FHS	2640
Economics	ECON	1010	Economics as a Social Science	ECON	1010			ECON	1010	ECON	1010	ECON	1010	ECON	1010	ECON	1010	ECON	1010	ECON	1010
Economics	ECON	1740	U S Economic History	ECON	1740			ECON	1740	ECON	1740	ECON	1740			ECON	1740	HIST	1740	ECON	1740

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Economics	ECON	2010	Principles of Microeconomics	ECON	2010	ECON	2010	ECON	2010	ECON	2010	ECON	2010	ECON	2010	ECON	2010	ECON	2010	ECON	2010
Economics	ECON	2020	Principles of Macroeconomics	ECON	2020	ECON	1500	ECON	2020	ECON	2020	ECON	2020	ECON	2020	ECON	2020	ECON	2020	ECON	2020
Economics	ECON	2100	Labor Economics	Upper	Div			Upper	Div							ECON	2100			ECON	2100
Economics	ECON	2250	Environmental Economics					ECON	1100											ECON	2250
Economics	ECON	2400	International Economics/Finance			Upper	Div	Upper	Div					Upper	Div					ECON	2400
Elementary Education	?	1010	Foundations of Education	TL	1010	ELED	1010	EDUC	1010	EDUC	2000	EDUC	1010	EDUC	1010	EDUC	1010	EDEL	1010	EDU	1010
Elementary Education	?	1500	Human Development (Child/Adolescent)	FCS	1500	FCHD	1500	CHF	1500	FLHD	1500	HFST	1500	PSY	1100	FAML	1500	PSY	1100	FHS	1500
Elementary Education	?	2010	Math for Elementary Teachers I	Upper	Div	STAT	1040	MATH	2010	MATH	2010	MATH	2010	MATH	2010	MATH	2020	MATH	2010	MATH	2010
Elementary Education	?	2020	Math for Elementary Teachers II	Upper	Div	MATH	2020	MATH	2020	MATH	2020	MATH	2020	MATH	2020	STAT	2040	MATH	2020	MATH	2020
Elementary Education	?	2110	Education Psychology	EDPS	3110	PSY	3660	EDUC	3140	ELED	3200			EDUC	3110			ELED	3000	EDU	2110
Elementary Education	?	2330	Children's Literature	TL	4330	ENG	3530	ENG	3300			ENGL	2330	ENGL	2330	ENGL	2330	EDEL	2330	ENG	2720
Elementary Education	?	2610	Child Guidance	FCS	2610	FCHD	2610			FLHD	2610	HFST	2610	FCS	2610	FAML	2610	EDEC	2610	FHS	2610
Elementary Education	?	3110	Education Psychology							ELED	3200			EDUC	3110			EDEL	3000		
Elementary Education	?	3330	Children's Literature					ENGL	3300	EDRG	3520										
Elementary Education	?	?	Introduction to Special Education/Exceptionalities					Upper	Div	SPED	3030							EDSP	3400	EDU	2010
Elementary Education	?	?	Ethnic Studies							ELED	3400	EDUC	2400								
Engineering	?	1000	Introduction to Engineering	CVEE N	1000	ENGR	1000	ENGR	1000	ENGR	1010	ENGR	1000	ENGR	1000	ENGN	1000	ENGR	1000	ENGR	1000
Engineering	?	1005	Introduction to Engineering Lab													ENGN	1005				
Engineering	?	1270	Analog Major: Circuits I	ECE	1270															EE	1270
Engineering	?	1275	Analog Major: Circuits I Lab																		
Engineering	?	1300	Statics & Strength of Materials	MEEN	1300																
Engineering	?	2010	Statics	CVEE N	2010	ENGR	2010	ENGR	2010	ENGR	2010	ENGR	2010	ENGR	2010	ENGN	2010	ENGR	2010	MEEN	2010
Engineering	?	2020	Dynamics I	MEEN	2020															MEEN	2020
Engineering	?	2030	Dynamics			ENGR	2030	ENGR	2080	ENGR	2030	ENGR	2030	ENGR	2030	ENGN	2030	ENGR	2030		
Engineering	?	2060	Dynamics II																	MEEN	2060
Engineering	?	2140	Strength of Materials	CVEE N	2140	ENGR	2140	ENGR	2140	ENGR	2140	ENGR	2140	ENGR	2140	ENGN	2140	ENGR	2140	MEEN	2140
Engineering	?	2145	Strength of Materials Lab							ENGR	2145									MEEN	2145
Engineering	?	2160	Materials Science	MSE	2160	MAE	2160	ENGR	2160	Upper	Div									MSE	2160
Engineering	?	2170	Materials Science ½ course	MSE	2170															MSE	2170
Engineering	?	2175	Materials Science Lab																		
Engineering	?	2200	Analog Majors ½ course	ECE	2200															EE	2200
Engineering	?	2205	Analog Majors Lab																		
Engineering	?	2210	Analog Non-Majors	ECE	2210	ETE	2210	ENGR	2210									EENG	2210	EE	2210
Engineering	?	2240	Survey & Global	CVEE N	2240	CEE	2240			ENGR	2240	ENGR	2240			ENGN	2240			CEEN	2240
Engineering	?	2245	Survey & Global Lab							ENGR	2245										
Engineering	?	2250	Electrical Circuits			ECE	2250	ENGR	2250			ENGR	2250	ENGR	2250	ENGN	2250				
Engineering	?	2260			2260																2260
Engineering	?	2270	Analog Major: Circuits	ECE	2270	ECE	2250	ENGR	2270	Upper	Div	ENGR	2270			ENGN	2270	EENG	2270	EE	2270
Engineering	?	2275	Analog Major: Circuits Lab							Upper	Div	ENGR	2275	ENGR	2275	ENGN	2275	EENG	2275		
Engineering	?	2280	Analog Major: Fundamentals of Electricity	ECE	2280															EE	2280
Engineering	?	2300	Thermodynamics I	CHEN	2300	MAE	2300	ENGR	2300	Upper	Div	ENGR	2300	ENGR	2300	ENGN	2300	ENGR	2300	MEEN	2300

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Engineering	?	2450	Numerical Methods	MEEN	2450	MAE	2450					ENGR	2450			ENGN	2450	ENGR	2450	MEEN CEEN	2450
Engineering	?	2650	Manufacturing	MEEN	2650	MAE	2650			Upper	Div									MEEN	2650
Engineering	?	2655	Manufacturing Lab	MEEN	2655																
Engineering	?	2700	Digital Circuits			ECE	2700	ENGR	2700			ENGR	2700					EENG	2700	EE	2700
Engineering	?	2705	Digital Circuits Lab									ENGR	2705					EENG	2705		
English	ENGL	1010	Introduction to Writing	WRTG	1010	ENGL	1010	ENGL	1010	ENGL	1010	ENGL	1010	ENGL	1010	ENGL	1010	ENGL	1010	ENGL	1010
English	ENGL	1410	Intro to Grammar	Upper	Div	ENGL	1120	Upper	Div	ENGL	1120	ENGL	1410	ENGL	1410						
English	ENGL	2010	Intermediate Writing	WRTG	2010	ENGL	2010	ENGL	2010	ENGL	2010	ENGL	2010	ENGL	2010	ENGL	2010	ENGL	2010	ENGL	2010
English	ENGL	2030	Discourse Studies													ENGL	2030	ENGL	2030	ENGL	2030
English	ENGL	2130	Science Fiction							ENGL	2130			ENGL	2130			ENGL	2130		
English	ENGL	2200	Literature (non-majors)			ENGL	2200	ENGL	2200	ENGL	2200	ENGL	2200	ENGL	2200	ENGL	2200	ENGL	2200	ENGL	2200
English	ENGL	2210	Introduction to Folklore	ENGL	2210	ENGL	2210					ENGL	2210					ENGL	2210	ENGL	2210
English	ENGL	2220	Introduction to Fiction					ENGL	2220				ENGL	2220		ENGL	2220				
English	ENGL	2230	Introduction to Mythology							ENGL	2230	ENGL	2230	ENGL	2230			ENGL	2230		
English	ENGL	2240	Introduction to Poetry					ENGL	2240	ENGL	2240	ENGL	2240			ENGL	2240				
English	ENGL	2290	Introduction to Drama					ENGL	2290					ENGL	2290					ENGL	2290
English	ENGL	2330	Children's Literature	ENGL	2330			Upper	Div			ENGL	2330	ENGL	2330	ENGL	2330			ENGL	2330
English	ENGL	2600	Introduction to Critical Literature	ENGL	2600	ENGL	2600			ENGL	2600	ENGL	2600	ENGL	2600	ENGL	2600	ENGL	2600	ENGL	2600
English	ENGL	2700	Introduction to Critical Theory																	ENGL	2700
Exercise & Sports Science/PE	PE__	1000	Cardio Fitness																	HLAC	1000
Exercise & Sports Science/PE	PE__	1010	Aerobics I	ESSF	1010	PE	1010	PE	1010			PE	1010	PEHR	1010	PE	1010	PES	1010	HLAC	1010
Exercise & Sports Science/PE	PE__	1011	Aerobics II					PE	1011									PES	1011		
Exercise & Sports Science/PE	PE__	1012	Aerobics III	ESSF	1012			PE	1012												
Exercise & Sports Science/PE	PE__	1013	Body Gym																	HLAC	1013
Exercise & Sports Science/PE	PE__	1015	Cycling/Spinning I	ESSF	1015															HLAC	1015
Exercise & Sports Science/PE	PE__	1016	Cycling/Spinning II	ESSF	1016	PE	1016														
Exercise & Sports Science/PE	PE__	1020	Step Aerobics I	ESSF	1020									PEHR	1020					HLAC	1020
Exercise & Sports Science/PE	PE__	1021	Step Aerobics II	ESSF	1021																
Exercise & Sports Science/PE	PE__	1022	Step Aerobics III	ESSF	1022																
Exercise & Sports Science/PE	PE__	1025	Interval Training																	HLAC	1025
Exercise & Sports Science/PE	PE__	1030	Kick Boxing I			PE	1030													HLAC	1030
Exercise & Sports Science/PE	PE__	1031	Kick Boxing II																		
Exercise & Sports Science/PE	PE__	1040	Walking I	ESSF	1040			PE	1040												
Exercise & Sports Science/PE	PE__	1041	Walking II	ESSF	1041			PE	1041												
Exercise & Sports Science/PE	PE__	1043	Jog I	ESSF	1043			PE	1043			PE	1043			PE	1043				
Exercise & Sports Science/PE	PE__	1044	Jog II	ESSF	1044			PE	1044												
Exercise & Sports Science/PE	PE__	1046	Jog/Walk I			PE	1046													HLAC	1046
Exercise & Sports Science/PE	PE__	1047	Jog/Walk II																		
Exercise & Sports Science/PE	PE__	1050	Power Tone															PES	1050		
Exercise & Sports Science/PE	PE__	1052	Boot Camp																		
Exercise & Sports Science/PE	PE__	1055	Pilates I			PE	1055									PE	1055			HLAC	1055
Exercise & Sports Science/PE	PE__	1056	Pilates II																		
Exercise & Sports Science/PE	PE__	1057	Yoga I	ESSF	1702	PE	1057	PE	1057					PEHR	1057	PE	1057	PES	1057	HLAC	1057
Exercise & Sports Science/PE	PE__	1058	Yoga II	ESSF	1703											PE	1058			HLAC	1058
Exercise & Sports Science/PE	PE__	1060	Nia																	HLAC	1060
Exercise & Sports Science/PE	PE__	1062	Flexibility for Fitness	ESSF	1062															HLAC	1062
Exercise & Sports Science/PE	PE__	1063	Conditioning I			PE	1063									PE	1063				
Exercise & Sports Science/PE	PE__	1064	Conditioning II																		
Exercise & Sports Science/PE	PE__	1065	Marathon	ESSF	1065																
Exercise & Sports Science/PE	PE__	1067	Triathlon	ESSF	1067																

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Exercise & Sports Science/PE	PE	1070	Cross Training I					PE	1070	PE	1070											
Exercise & Sports Science/PE	PE	1071	Cross Training II					PE	1071													
Exercise & Sports Science/PE	PE	1072	Cross Training III					PE	1072													
Exercise & Sports Science/PE	PE	1073	Circuit Training I	ESSF	1073							PE	1073								HLAC	1073
Exercise & Sports Science/PE	PE	1074	Circuit Training II																			
Exercise & Sports Science/PE	PE	1075	Circuit Training III																			
Exercise & Sports Science/PE	PE	1080	Strength Training I					PE	1080												HLAC	1080
Exercise & Sports Science/PE	PE	1081	Strength Training II					PE	1081												HLAC	1081
Exercise & Sports Science/PE	PE	1082	Strength Training III					PE	1082													
Exercise & Sports Science/PE	PE	1085	Weight Training I	ESSF	1085	PE	1085			PE	1085	PE	1085	PEHR	1085	PE	1085	PES	1085			
Exercise & Sports Science/PE	PE	1086	Weight Training II	ESSF	1086											PE	1086	PES	1086			
Exercise & Sports Science/PE	PE	1087	Weight Training III	ESSF	1087													PES	1087			
Exercise & Sports Science/PE	PE	1088	Fitness Center I											PEHR	1088							
Exercise & Sports Science/PE	PE	1089	Fitness Center II											PEHR	1089							
Exercise & Sports Science/PE	PE	1090	Fitness Center III											PEHR	1090							
Exercise & Sports Science/PE	PE	1091	Fitness Center IV											PEHR	1091							
Exercise & Sports Science/PE	PE	1092	Fitness Center V											PEHR	1092							
Exercise & Sports Science/PE	PE	1093	Fitness Center VI											PEHR	1093							
Exercise & Sports Science/PE	PE	1094	Fitness Center VII											PEHR	1094							
Exercise & Sports Science/PE	PE	1095	Fitness Center VIII											PEHR	1095							
Exercise & Sports Science/PE	PE	1096	Fitness for Life (1 crhr)									PE	1096								HLAC	1096
Exercise & Sports Science/PE	PE	1097	Fitness for Life (2 crhr)													PE	1097	PES	1097			
Exercise & Sports Science/PE	PE	1098	Fitness for Life (3 crhr)	ESSF	1098					PE	1098											
Exercise & Sports Science/PE	PE	1100	Tennis I	ESSF	1100	PE	1100	PE	1100	PE	1100	PE	1100	PEHR	1100	PE	1100	PES	1100		HLAC	1100
Exercise & Sports Science/PE	PE	1101	Tennis II	ESSF	1101	PE	1101	PE	1101			PE	1101			PE	1101	PES	1101		HLAC	1101
Exercise & Sports Science/PE	PE	1102	Tennis III	ESSF	1102			PE	1102												HLAC	1102
Exercise & Sports Science/PE	PE	1105	Badminton I	ESSF	1105	PE	1105	PE	1105									PES	1105			
Exercise & Sports Science/PE	PE	1106	Badminton II	ESSF	1106			PE	1106													
Exercise & Sports Science/PE	PE	1107	Badminton III																			
Exercise & Sports Science/PE	PE	1110	Racquetball I	ESSF	1110	PE	1110	PE	1110	PE	1110	PE	1110	PEHR	1110	PE	1110	PES	1110		HLAC	1110
Exercise & Sports Science/PE	PE	1111	Racquetball II	ESSF	1111	PE	1111	PE	1111			PE	1111			PE	1111	PES	1111		HLAC	1111
Exercise & Sports Science/PE	PE	1112	Racquetball III	ESSF	1112	PE	1112	PE	1112													
Exercise & Sports Science/PE	PE	1115	Squash I	ESSF	1115																	
Exercise & Sports Science/PE	PE	1116	Squash II	ESSF	1116																	
Exercise & Sports Science/PE	PE	1117	Squash III																			
Exercise & Sports Science/PE	PE	1120	Handball I			PE	1120															
Exercise & Sports Science/PE	PE	1121	Handball II																			
Exercise & Sports Science/PE	PE	1122	Handball III																			
Exercise & Sports Science/PE	PE	1125	Pickleball I																			
Exercise & Sports Science/PE	PE	1126	Pickleball II																			
Exercise & Sports Science/PE	PE	1127	Pickleball III																			
Exercise & Sports Science/PE	PE	1130	Golf I	ESSF	1130	PE	1130	PE	1130	PE	1130	PE	1130	PEHR	1130	PE	1130	PES	1130		HLAC	1130
Exercise & Sports Science/PE	PE	1131	Golf II	ESSF	1131	PE	1131	PE	1131			PE	1131					PES	1131		HLAC	1131
Exercise & Sports Science/PE	PE	1132	Golf III	ESSF	1132			PE	1132													
Exercise & Sports Science/PE	PE	1133	Golf IV							PE	1133											
Exercise & Sports Science/PE	PE	1135	Archery I					PE	1135			PE	1135			PE	1135	PES	1135			
Exercise & Sports Science/PE	PE	1136	Archery II					PE	1136			PE	1136			PE	1136	PES	1136			
Exercise & Sports Science/PE	PE	1137	Archery III					PE	1137													
Exercise & Sports Science/PE	PE	1140	Marksman I					PE	1140													
Exercise & Sports Science/PE	PE	1141	Marksman II																			
Exercise & Sports Science/PE	PE	1142	Marksman III																			
Exercise & Sports Science/PE	PE	1145	Bowling I	ESSF	1145	PE	1145	PE	1145	PE	1145	PE	1145	PEHR	1145	PE	1145	PES	1145		HLAC	1145

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Exercise & Sports Science/PE	PE	1146	Bowling II	ESSF	1146	PE	1146	PE	1146							PE	1146	PES	1146	HLAC	1146
Exercise & Sports Science/PE	PE	1147	Bowling III	ESSF	1147			PE	1147											HLAC	1147
Exercise & Sports Science/PE	PE	1150	Billiards I			PE	1150	PE	1150												
Exercise & Sports Science/PE	PE	1151	Billiards II			PE	1151	PE	1151												
Exercise & Sports Science/PE	PE	1152	Billiards III			PE	1152	PE	1152												
Exercise & Sports Science/PE	PE	1155	Fencing I	ESSF	1155	PE	1155	PE	1155									PES	1155		
Exercise & Sports Science/PE	PE	1156	Fencing II	ESSF	1156			PE	1156												
Exercise & Sports Science/PE	PE	1157	Fencing III	ESSF	1157			PE	1157												
Exercise & Sports Science/PE	PE	1160	Wrestling																		
Exercise & Sports Science/PE	PE	1170	Gymnastics I	ESSF	1170	PE	1170									PE	1170				
Exercise & Sports Science/PE	PE	1171	Gymnastics II	ESSF	1171											PE	1171				
Exercise & Sports Science/PE	PE	1172	Gymnastics III	ESSF	1172																
Exercise & Sports Science/PE	PE	1200	Basketball I	ESSF	1200	PE	1200	PE	1200			PE	1200	PEHR	1200	PE	1200	PES	1200	HLAC	1200
Exercise & Sports Science/PE	PE	1201	Basketball II	ESSF	1201			PE	1201							PE	1201	PES	1201	HLAC	1201
Exercise & Sports Science/PE	PE	1202	Basketball III					PE	1202												
Exercise & Sports Science/PE	PE	1205	Handball I	ESSF	1205																
Exercise & Sports Science/PE	PE	1206	Handball II																		
Exercise & Sports Science/PE	PE	1207	Handball III																		
Exercise & Sports Science/PE	PE	1210	Volleyball I	ESSF	1210	PE	1210	PE	1210			PE	1210	PEHR	1210	PE	1210	PES	1210	HLAC	1210
Exercise & Sports Science/PE	PE	1211	Volleyball II	ESSF	1211	PE	1211	PE	1211			PE	1211			PE	1211	PES	1211	HLAC	1211
Exercise & Sports Science/PE	PE	1212	Volleyball III	ESSF	1212	PE	1212	PE	1212									PES	1212	HLAC	1212
Exercise & Sports Science/PE	PE	1215	Walleyball									PE	1215								
Exercise & Sports Science/PE	PE	1220	Baseball																		
Exercise & Sports Science/PE	PE	1225	Softball I	ESSF	1225	PE	1225	PE	1225			PE	1225	PEHR	1225					HLAC	1225
Exercise & Sports Science/PE	PE	1226	Softball II	ESSF	1226																
Exercise & Sports Science/PE	PE	1227	Softball III																		
Exercise & Sports Science/PE	PE	1230	Soccer I	ESSF	1230	PE	1230	PE	1230					PEHR	1230			PES	1230	HLAC	1230
Exercise & Sports Science/PE	PE	1231	Soccer II	ESSF	1231			PE	1231									PES	1231	HLAC	1231
Exercise & Sports Science/PE	PE	1232	Soccer III					PE	1232												
Exercise & Sports Science/PE	PE	1233	Soccer - Co-ed																	HLAC	1232
Exercise & Sports Science/PE	PE	1235	Football			PE	1235							PEHR	1235						
Exercise & Sports Science/PE	PE	1240	Rugby																		
Exercise & Sports Science/PE	PE	1245	Ultimate Frisbee	ESSF	1245	PE	1245														
Exercise & Sports Science/PE	PE	1250	Lacrosse	ESSF	1250																
Exercise & Sports Science/PE	PE	1255	Field Hockey	ESSF	1255																
Exercise & Sports Science/PE	PE	1260	Ice Hockey			PE	1260											PES	1260		
Exercise & Sports Science/PE	PE	1265	Water Polo I	ESSF	1265			PE	1265												
Exercise & Sports Science/PE	PE	1266	Water Polo II	ESSF	1266																
Exercise & Sports Science/PE	PE	1267	Water Polo III																		
Exercise & Sports Science/PE	PE	1300	Swimming I	ESSF	1300	PE	1300	PE	1300	PE	1300	PE	1300	PEHR	1300	PE	1300	PES	1300	HLAC	1300
Exercise & Sports Science/PE	PE	1301	Swimming II	ESSF	1301	PE	1301	PE	1301			PE	1301			PE	1301	PES	1301	HLAC	1301
Exercise & Sports Science/PE	PE	1302	Swimming III	ESSF	1302			PE	1302			PE	1302								
Exercise & Sports Science/PE	PE	1303	Swimming IV																		
Exercise & Sports Science/PE	PE	1304	Swimming V																		
Exercise & Sports Science/PE	PE	1305	Swimming VI							PE	1305										
Exercise & Sports Science/PE	PE	1310	Water Fitness									PE	1310							HLAC	1310
Exercise & Sports Science/PE	PE	1315	Water Aerobics			PE	1315	PE	1310					PEHR	1315			PES	1315		
Exercise & Sports Science/PE	PE	1320	Aqua Tone	ESSF	1320																
Exercise & Sports Science/PE	PE	1325	Aqua Size	ESSF	1325																
Exercise & Sports Science/PE	PE	1330	Power Swim																	HLAC	1330
Exercise & Sports Science/PE	PE	1335	Diving I	ESSF	1335															HLAC	1335
Exercise & Sports Science/PE	PE	1336	Diving II	ESSF	1336																

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Exercise & Sports Science/PE	PE	1337	Diving III																		
Exercise & Sports Science/PE	PE	1340	Lifeguard	ESSF	1340			PE	1340	PE	1340	PE	1340	PEHR	1340	PE	1340			HLAC	1340
Exercise & Sports Science/PE	PE	1345	Water Safety Instructor	ESSF	1345							PE	1345	PEHR	1345	PE	1345				
Exercise & Sports Science/PE	PE	1350	Scuba I	ESSF	1350			PE	1350	PE	1350			PEHR	1350			REC	1350	HLAC	1350
Exercise & Sports Science/PE	PE	1351	Scuba II	ESSF	1351					PE	1355							REC	1351	HLAC	1351
Exercise & Sports Science/PE	PE	1352	Scuba III	ESSF	1352																
Exercise & Sports Science/PE	PE	1353	Scuba IV	ESSF	1353																
Exercise & Sports Science/PE	PE	1400	Self Defense	ESSF	1400	PE	1400	PE	1400							PE	1400				
Exercise & Sports Science/PE	PE	1405	Women's Self Defense															PES	1405		
Exercise & Sports Science/PE	PE	1407	Rape Aggression Defense			PE	1407					PE	1407								
Exercise & Sports Science/PE	PE	1410	Tai Chi I	ESSF	1410	PE	1410	PE	1410									PES	1410	HLAC	1410
Exercise & Sports Science/PE	PE	1411	Tai Chi II	ESSF	1411			PE	1411												
Exercise & Sports Science/PE	PE	1412	Tai Chi III					PE	1412												
Exercise & Sports Science/PE	PE	1415	Martial Arts I	ESSF	1415													PES	1415		
Exercise & Sports Science/PE	PE	1416	Martial Arts II	ESSF	1416																
Exercise & Sports Science/PE	PE	1417	Martial Arts III																		
Exercise & Sports Science/PE	PE	1420	Judo I	ESSF	1420																
Exercise & Sports Science/PE	PE	1421	Judo II	ESSF	1421																
Exercise & Sports Science/PE	PE	1422	Judo III																		
Exercise & Sports Science/PE	PE	1425	Jiu Jitsu															PES	1425		
Exercise & Sports Science/PE	PE	1430	Karate I	ESSF	1430	PE	1430														
Exercise & Sports Science/PE	PE	1431	Karate II	ESSF	1431																
Exercise & Sports Science/PE	PE	1432	Karate III																		
Exercise & Sports Science/PE	PE	1435	Kempo Karate					PE	1435									PES	1435		
Exercise & Sports Science/PE	PE	1440	Aikido I	ESSF	1440	PE	1440											PES	1440		
Exercise & Sports Science/PE	PE	1441	Aikido II	ESSF	1441																
Exercise & Sports Science/PE	PE	1442	Aikido III																		
Exercise & Sports Science/PE	PE	1445	Tae Kwon-do I	ESSF	1445	PE	1445	PE	1445							RECR	1445			HLAC	1445
Exercise & Sports Science/PE	PE	1446	Tae Kwon-do II	ESSF	1446			PE	1446											HLAC	1446
Exercise & Sports Science/PE	PE	1447	Tae Kwon-do III					PE	1447											HLAC	1447
Exercise & Sports Science/PE	PE	1450	Kung Fu I											PEHR	1450					HLAC	1450
Exercise & Sports Science/PE	PE	1451	Kung Fu II																	HLAC	1451
Exercise & Sports Science/PE	PE	1455	Boxing																		
Exercise & Sports Science/PE	PE	1500	Canoeing													RECR	1500	REC	1500		
Exercise & Sports Science/PE	PE	1505	Kayaking I	ESSF	1505	PE	1505					PE	1505			RECR	1505	REC	1505		
Exercise & Sports Science/PE	PE	1506	Kayaking II	ESSF	1506											RECR	1506	REC	1506		
Exercise & Sports Science/PE	PE	1507	Kayaking III	ESSF	1507																
Exercise & Sports Science/PE	PE	1510	Fishing			PE	1510	PE	1510					PEHR	1510						
Exercise & Sports Science/PE	PE	1512	Fly Tying			PE	1512									RECR	1040	REC	1512		
Exercise & Sports Science/PE	PE	1513	Fly Casting			PE	1513									RECR	1050	REC	1513		
Exercise & Sports Science/PE	PE	1515	Sailing			PE	1515	PE	1515												
Exercise & Sports Science/PE	PE	1517	Board Sailing															REC	1517		
Exercise & Sports Science/PE	PE	1518	Windsurfing																		
Exercise & Sports Science/PE	PE	1520	Hiking I			PE	1520	PE	1520							RECR	1520			HLAC	1520
Exercise & Sports Science/PE	PE	1521	Hiking II					PE	1521											HLAC	1521
Exercise & Sports Science/PE	PE	1523	Orienteering			PE	1523									RECR	1524				
Exercise & Sports Science/PE	PE	1525	Mountaineering													RECR	1480	REC	1525		
Exercise & Sports Science/PE	PE	1527	Rock Climbing I			PE	1527	PE	1527			PE	1527	PEHR	1527	RECR	1527	REC	1527	HLAC	1527
Exercise & Sports Science/PE	PE	1528	Rock Climbing II					PE	1528									REC	1528	HLAC	1528
Exercise & Sports Science/PE	PE	1530	Primitive Survival Skills											PEHR	1530						
Exercise & Sports Science/PE	PE	1532	Outdoor Survival			PE	1532					PE	1538			RECR	1330				
Exercise & Sports Science/PE	PE	1535	Backpacking											PEHR	1535	RECR	1210	REC	1535		

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Exercise & Sports Science/PE	PE	1538	Yurt Camping			PE	1538															
Exercise & Sports Science/PE	PE	1540	Outdoor Related Activities																		HLAC	1540
Exercise & Sports Science/PE	PE	1542	Wilderness First Responder							PE	1542							REC	1542			
Exercise & Sports Science/PE	PE	1543	First Aid			PE	1543	HLTH	1300	PE	1543	PE	1543	PEHR	1543	HEAL	1020					
Exercise & Sports Science/PE	PE	1545	Outdoor Cooking											PEHR	1545							
Exercise & Sports Science/PE	PE	1547	Spelunking																			
Exercise & Sports Science/PE	PE	1550	Mountain Biking I	ESSF	1550	PE	1550					PE	1550	PEHR	1550	RECR	1310	REC	1550	HLAC	1550	
Exercise & Sports Science/PE	PE	1551	Mountain Biking II	ESSF	1551															HLAC	1551	
Exercise & Sports Science/PE	PE	1555	Road Biking																			
Exercise & Sports Science/PE	PE	1557	Cycling					PE	1557													
Exercise & Sports Science/PE	PE	1560	Horseback Riding									PE	1560			RECR	1440					
Exercise & Sports Science/PE	PE	1565	In-Line Skating I	ESSF	1565																	
Exercise & Sports Science/PE	PE	1566	In-Line Skating II	ESSF	1566																	
Exercise & Sports Science/PE	PE	1567	In-Line Skating III																			
Exercise & Sports Science/PE	PE	1570	National Outdoor Leadership			PE	1570															
Exercise & Sports Science/PE	PE	1575	Rodeo											PEHR	1575							
Exercise & Sports Science/PE	PE	1600	Winter Exploration			PE	1600															
Exercise & Sports Science/PE	PE	1605	Skiing			PE	1605												REC	1605		
Exercise & Sports Science/PE	PE	1610	Skiing/Snowboarding					PE	1610	PE	1610					PE	1610				HLAC	1610
Exercise & Sports Science/PE	PE	1615	Snowboarding			PE	1615	PE	1620											REC	1615	
Exercise & Sports Science/PE	PE	1620	Ski Instructor																	REC	1620	
Exercise & Sports Science/PE	PE	1625	Cross Country Skiing			PE	1625			PE	1625	PE	1625			PE	1625			REC	1625	
Exercise & Sports Science/PE	PE	1630	Cross Country Skiing Classic					PE	1630							PE	1630					
Exercise & Sports Science/PE	PE	1635	Telemark Skiing				1635					PE	1635									
Exercise & Sports Science/PE	PE	1640	Back Country Skiing																			
Exercise & Sports Science/PE	PE	1645	Ski Touring																			
Exercise & Sports Science/PE	PE	1650	Skate Skiing																			
Exercise & Sports Science/PE	PE	1655	Snow Shoeing I			PE	1655														HLAC	1655
Exercise & Sports Science/PE	PE	1656	Snow Shoeing II																		HLAC	1656
Exercise & Sports Science/PE	PE	1660	Ice Climbing																			
Exercise & Sports Science/PE	PE	1670	Ice Skating I	ESSF	1670	PE	1670												PES	1670	HLAC	1670
Exercise & Sports Science/PE	PE	1671	Ice Skating II			PE	1671															
Exercise & Sports Science/PE	PE	1672	Ice Skating III																			
Exercise & Sports Science/PE	PE	1675	Speed Skating																			
Exercise & Sports Science/PE	PE	1680	Curling			PE	1680															
Exercise & Sports Science/PE	PE	1700	Dance			PE	1700															
Exercise & Sports Science/PE	PE	1705	Line Dance																			
Exercise & Sports Science/PE	PE	1710	Western Swing			PE	1710					PE	1710									
Exercise & Sports Science/PE	PE	1715	Country Western Dance I	ESSF	1715																HLAC	1715
Exercise & Sports Science/PE	PE	1716	Country Western Dance II	ESSF	1716																HLAC	1716
Exercise & Sports Science/PE	PE	1720	Social Dance I			PE	1720							PEHR	1720						HLAC	1720
Exercise & Sports Science/PE	PE	1721	Social Dance II																		HLAC	1721
Exercise & Sports Science/PE	PE	1725	Social Latin Dance																			
Exercise & Sports Science/PE	PE	1730	Folk Dance I	ESSF	1730			DANC	1520												HLAC	1730
Exercise & Sports Science/PE	PE	1731	Folk Dance II	ESSF	1731																	
Exercise & Sports Science/PE	PE	1735	Latin American Dance I	ESSF	1735																	
Exercise & Sports Science/PE	PE	1736	Latin American Dance II	ESSF	1736																	
Exercise & Sports Science/PE	PE	1740	Ballroom Dance	ESSF	1740																	
Exercise & Sports Science/PE	PE	1745	Swing	ESSF	1745	PE	1745															
Exercise & Sports Science/PE	PE	1750	Clogging																			
Exercise & Sports Science/PE	PE	1755	Tap	ESSF	1620			DANC	1580													
Exercise & Sports Science/PE	PE	1760	Dance Promo																			

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Family & Human Development	?	1400	Marriage					CHF	1400			HFST	1400					ECFS	1400		
Family & Human Development	?	1500	Human Development Across the Lifespan	FCS	1500	FCHD	1500	CHF	1500	FLHD	1500	HFST	1500	FCS	1500	FAML	1500	PSY	1100	FHS	1500
Family & Human Development	?	2400	Family Relations	FCS	2400	FCHD	2400	CHF	2400	FLHD	2400	HFST	2400	FCS	2400	FAML	2400	ECFS	2400	FHS	2400
Family & Human Development	?	2500	Child Development/Birth to Eight	FCS	3215	Upper Div		CHF	2500			HFST	2500	FCS	2500	FAML	2500	EDEC	2500	FHS	2500
Family & Human Development	?	2570	Child Development/Six to Twelve	FCS	2570	Upper Div		CHF	2570											FHS	2570
Family & Human Development	?	2600	Introduction to Early Childhood Education			FCHD	2600	CHF	2600			HFST	2600	FCS	2600	FAML	2600	EDEC	2600	FHS	2600
Family & Human Development	?	2610	Guidance	FCS	2610	FCHD	2610	CHF	2610	FLHD	2610	HFST	2610	FCS	2610	FAML	2610	EDEC	2610	FHS	2610
Family & Human Development	?	2620	Creative Play	FCS	2620			CHF	2620	Upper Div		HFST	2620	FCS	2620	FAML	2620	EDEC	2620	FHS	2620
Family & Human Development	?	2640	Working with Families/Parents					Upper Div						FCS	2640					FHS	2640
Family & Human Development	?	2610L	Lab							FLHD	2611	HFST	2615	FCS	2615						
Geography	GEOG	1000	Physical Geography	GEOG	1000	GEOG	1000	GEOG	1000	GEOG	1000	GEOG	1000	GEOG	1000	GEOG	1000			GEOG	1000
Geography	GEOG	1005	Physical Geography Lab			GEOG	1005			GEOG	1005	GEOG	1005								
Geography	GEOG	1300	World Regional Geography	GEOG	1300	GEOG	1300	GEOG	1300	GEOG	1300	GEOG	1300					GEOG	1300	GEOG	1300
Geography	GEOG	1400	Human Geography	GEOG	1400	GEOG	1400			GEOG	1400			GEOG	1400	GEOG	1400	GEOG	1400	GEOG	1400
Geography	GEOG	1800	Two year GIS introductory courses									GEOG	1800			GEOG	1800	GEOG	1800	GEOG	1800
Geology	GEO	1010	Introduction Survey, Essentials			GEO	1010			GEO	1010	GEO	1010	GEO	1010	GEO	1010	GEO	1010	GEO	1010
Geology	GEO	1015	Introduction Survey Lab, Essentials							GEO	1015	GEO	1015					GEO	1015		
Geology	GEO	1020	Life of the Past Fossil, Life History	GEO	1020			GEO	1020					GEO	1020	GEO	1020	GEO	1020		
Geology	GEO	1025	Life of the Past Fossil Lab															GEO	102H		
Geology	GEO	1030	Earthquakes and Volcanoes, Natural Disasters	GEO	1030			GEO	1030	GEO	1030										
Geology	GEO	1035	Earthquakes and Volcanoes, Natural Disasters Lab							GEO	1035										
Geology	GEO	1040	Dinosaurs	GEO	1040									GEO	1040						
Geology	GEO	1045	Dinosaurs Lab																		
Geology	GEO	1050	Geology of National Parks	GEO	1050					GEO	1050	GEO	1050	GEO	1050						
Geology	GEO	1055	National Parks Lab	GEO	1055					GEO	1055			GEO	1055						
Geology	GEO	1060	Intro to Environmental Geology	GEO	1060	GEO	1060	GEO	1060	Upper Div		GEO	1060	GEO	1060					GEO	1060
Geology	GEO	1065	Intro to Environmental Lab					GEO	1065	Upper Div										GEO	1065
Geology	GEO	1070	Unstable Ground																		
Geology	GEO	1075	Unstable Ground Lab																		
Geology	GEO	1080	Intro to Oceanography			Upper Div	Upper Div	Upper Div	Upper Div			GEO	1080					GEO	1080		
Geology	GEO	1085	Intro to Oceanography Lab							Upper Div		GEO	1085					GEO	1085		
Geology	GEO	1090	Earth Systems							GEO	1090										
Geology	GEO	1095	Earth Systems Lab							GEO	1095										
Geology	GEO	1110	Physical Geology (science majors only)	GEO	1110	GEO	1110	GEO	1110	GEO	1110	GEO	1110	GEO	1110	GEO	1110			GEO	1110
Geology	GEO	1115	Physical Geology Lab (science majors only)	GEO	1115			GEO	1115	GEO	1115	GEO	1115	GEO	1115	GEO	1115			GEO	1115
Geology	GEO	1220	Historical Geology (science majors only)	GEO	1220			GEO	1220	GEO	1220	GEO	1220			GEO	1220	GEO	1220	GEO	1220
Geology	GEO	1225	Historical Geology Lab (science majors only)							GEO	1225	GEO	1225			GEO	1225	GEO	1225	GEO	1225
History	HIST	1100	Western Civilization I	HIST	1100	HIST	1100			HIST	1100	HIST	1500	HIST	1100	HIST	1100			HIST	1100
History	HIST	1110	Western Civilization II	HIST	1110	HIST	1110			HIST	1110	HIST	1510	HIST	1110	HIST	1110			HIST	1110
History	HIST	1500	World History to 1500	HIST	1500	HIST	1500	HIST	1500	HIST	1500	HIST	1500			HIST	1500	HIST	1500	HIST	1500
History	HIST	1510	World History from 1500 to the Present	HIST	1510	HIST	1510	HIST	1510	HIST	1510	HIST	1510			HIST	1510	HIST	151G	HIST	1510
History	HIST	1700	American Civilization	HIST	1700	HIST	1700	HIST	1700	HIST	1700	HIST	1700	HIST	1700	HIST	1700	HIST	1700	HIST	1700

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History	HIST	2700	United States to 1877	HIST	2700	HIST	2700	HIST	2700	HIST	2700	HIST	2700			HIST	2700	HIST	2700	HIST	2700	
History	HIST	2710	United States 1877 to Present	HIST	2710	HIST	2710	HIST	2710	HIST	2710	HIST	2710			HIST	2710	HIST	2710	HIST	2710	
Mathematics	MATH	0800	Fundamentals of Arithmetic															MATH	0800			
Mathematics	MATH	0900	Basic Math																	MATH	0900	
Mathematics	MATH	0920	Pre-Algebra											MATH	0920					MATH	0920	
Mathematics	MATH	0925	Basic Math Workshop																	MATH	0925	
Mathematics	MATH	0950	Pre-Algebra					MATH	0950									MATH	0950	MATH	0950	
Mathematics	MATH	0955	Pre-Algebra					MATH	0955													
Mathematics	MATH	0960	Pre-Algebra					MATH	0960													
Mathematics	MATH	0970	Pre-Algebra										MATH	0970			MATH	0970				
Mathematics	MATH	0980	Elementary Algebra															MATH	0980			
Mathematics	MATH	0990	Beginning Algebra	MATH	0990								MATH	0990	MATH	0990	MATH	0990	MATH	0990	MATH	0990
Mathematics	MATH	0995	Elementary Algebra Workshop																	MATH	0995	
Mathematics	MATH	1000	Intermediate Algebra															MATH	1000			
Mathematics	MATH	1010	Intermediate Algebra	MATH	1010	MATH	1010	MATH	1010	MATH	1010	MATH	1010	MATH	1010	MATH	1010	MATH	1010	MATH	1010	
Mathematics	MATH	1030	Quantitative Reasoning	MATH	1030	MATH	1030	MATH	1030	MATH	1030	MATH	1030	MATH	1030	MATH	1030	MATH	1030	MATH	1030	
Mathematics	MATH	1040	Statistics	MATH	1040	STAT	1040	MATH	1040	MATH	1040	MATH	1040	MATH	1040			MATH	1040	MATH	1040	
Mathematics	MATH	1050	College Algebra	MATH	1050	MATH	1050	MATH	1050	MATH	1050	MATH	1050	MATH	1050	MATH	1050	MATH	1050	MATH	1050	
Mathematics	MATH	1070	Statistics	MATH	1070	STAT	2000	QUANT	2600													
Mathematics	MATH	1100	Applied Calculus	MATH	1100	MATH	1100	QUANT	2400	MATH	1100	MATH	1100	MATH	1100	MATH	1100	MATH	1100			
Mathematics	MATH	1630	Discrete Math (1050 prerequisite)			Upper	Div	MATH	1630	MATH	1630	MATH	1630									
Mathematics	MATH	2010	Math for Elementary Education I	Upper	Div			MATH	2010	MATH	2010	MATH	2010	MATH	2010	MATH	2020	MATH	2010	MATH	2010	
Mathematics	MATH	2020	Math for Elementary Education II	Upper	Div			MATH	2020	MATH	2020	MATH	2020	MATH	2020			MATH	2020	MATH	2020	
Mathematics	MATH	2040	Applied Statistics							MATH	2040	MATH	2040	STAT	2040			MATH	2040	MATH	2040	
Mathematics	MATH	2200	Discrete Math (1220 prerequisite)	MATH	2200												MATH	2220				
Mathematics	MATH	2270	Linear Algebra	MATH	2270	MATH	2270	MATH	2270	MATH	2270	MATH	2270	MATH	2270	MATH	2270	MATH	2270	MATH	2270	
Mathematics	MATH	2280	Differential Equations	MATH	2280	MATH	2280	MATH	2280	MATH	2280	MATH	2280	MATH	2280	MATH	2280	MATH	2280	MATH	2280	
Mathematics	MATH	090R	Math Pass															MATH	090R			
Music	MUSC	1010	Introduction to Music	MUSC	1010	MUSC	1010	MUSC	1010	MUSC	1010	MUSC	1010	MUSC	1010	MUSC	1010	MUSC	1010	MUSC	1010	
Music	MUSC	1100	Fundamentals of Music	MUSC	1100	MUSC	1100	MUSC	1100			MUSC	1100	MUSC	1100			MUSC	1100	MUSC	1100	
Music	MUSC	1110	Music Theory I	MUSC	1110	MUSC	1110	MUSC	1110	MUSC	1110	MUSC	1110	MUSC	1110	MUSC	1110	MUSC	1110	MUSC	1110	
Music	MUSC	1120	Music Theory II	MUSC	1120	MUSC	1120	MUSC	1120	MUSC	1120	MUSC	1120	MUSC	1120	MUSC	1120	MUSC	1120	MUSC	1120	
Music	MUSC	1130	Sight Sing/Ear Training I	MUSC	1130	MUSC	1130	MUSC	1130	MUSC	1130	MUSC	1130	MUSC	1130	MUSC	1130	MUSC	1130	MUSC	1130	
Music	MUSC	1140	Sight Sing/Ear Training II	MUSC	1140	MUSC	1140	MUSC	1140	MUSC	1140	MUSC	1140	MUSC	1140	MUSC	1140	MUSC	1140	MUSC	1140	
Music	MUSC	1150	Class Piano I	MUSC	1150	MUSC	1150	MUSC	1150	MUSC	1150	MUSC	1150	MUSC	1150	MUSC	1150	MUSC	1150	MUSC	1150	
Music	MUSC	1160	Class Piano II	MUSC	1160	MUSC	1160	MUSC	1160	MUSC	1160	MUSC	1160	MUSC	1160	MUSC	1160	MUSC	1160	MUSC	1160	
Music	MUSC	2110	Music Theory III	MUSC	2110	MUSC	2110	MUSC	2110	MUSC	2110	MUSC	2110	MUSC	2110			MUSC	2110	MUSC	2110	
Music	MUSC	2120	Music Theory IV			MUSC	2120	MUSC	2120	MUSC	2120	MUSC	2120	MUSC	2120			MUSC	2120	MUSC	2120	
Music	MUSC	2130	Sight Sing/Ear Training III	MUSC	2130	MUSC	2130	MUSC	2130	MUSC	2130	MUSC	2130	MUSC	2130					MUSC	2130	
Music	MUSC	2140	Sight Sing/Ear Training IV	MUSC	2140	MUSC	2140	MUSC	2140	MUSC	2140	MUSC	2140	MUSC	2140					MUSC	2140	
Music	MUSC	2150	Class Piano III	MUSC	2150			MUSC	2150			MUSC	2150	MUSC	2150							
Music	MUSC	2160	Class Piano IV	MUSC	2160			MUSC	2160			MUSC	2160	MUSC	2160							
Music	MUSC	2350	Fundamentals of Conducting	MUSC	2350	MUSC	2350			MUSC	2350	MUSC	2350	MUSC	2350	MUSC	2350	MUSC	2350	MUSC	2350	
Nutrition/Nutrition & Food Science	NUTR/NFS	1020	Introductory Course	NUTR	1020	NFS	1020	NUTR	1020	NFS	1020	HFST	1020	NFS	1020	FAML	1020	NUTR	1020	HLTH	1020	
Nutrition/Nutrition & Food Science	NUTR/NFS	1240	Culinary Arts			NFS	1240			NFS	1240	HFST	1240	NFS	1240							
Nutrition/Nutrition & Food Science	NUTR/NFS	1241	Culinary Arts Lab							NFS	1241											

Major	CCP	CCN	2008 Generic Course Title	UU P	UU N	USU P	USU N	WSU P	WSU N	SUU P	SUU N	Snow P	Snow N	DSC P	DSC N	CEU P	CEU N	UVU P	UVU N	SLCC P	SLCC N
Nutrition/Nutrition & Food Science	NUTR/NFS	2020	Nutrition in the Life Cycle			NFS	2020			NFS	2020			NFS	2020			NUTR	2020	HLTH	2020
Nutrition/Nutrition & Food Science	NUTR/NFS	2120	Infant and Child Nutrition					NUTR	2220 2420	NFS	2120	HFST	2120	NFS	2120						
Nutrition/Nutrition & Food Science	NUTR/NFS	3020	Nutrition as Related to Fitness and Sports			NFS	3020	NUTR	3020	NFS	3020									HLTH	3020
Nutrition/Nutrition & Food Science	NUTR/NFS	4020	Advanced Human Nutrition	NUTR	4020	NFS	4020			NFS	4020										
Philosophy	PHIL	1000	Introduction to Philosophy	PHIL	1000	PHIL	1000	PHIL	1000	PHIL	1000	PHIL	1000	PHIL	1000	PHIL	1000	PHIL	1000	PHIL	1000
Philosophy	PHIL	1120	Social Ethics			PHIL	1120	PHIL	1120			PHIL	2050	PHIL	1120					PHIL	1130
Philosophy	PHIL	1250	Reason and Rational Decision Making	PHIL	1250	PHIL	1250	PHIL	1250	PHIL	1250							PHIL	1250	PHIL	1250
Philosophy	PHIL	2200	Deduction			PHIL	2200	PHIL	2200												
Philosophy	PHIL	2350	Philosophy of Religion	PHIL	3600	PHIL	3600		Div							PHIL	2350	PHIL	3600	PHIL	2350
Philosophy	PHIL	2600	World Religions	PHIL	3640			Upper	Div			PHIL	2600					PHIL	1600 1620		
Physics	PHYS	1010	Elementary Physics	PHYS	1010			PHYS	1010	PHYS	1010	PHYS	1010	PHYS	1010	PHYS	1010	PHYS	1010	PHYS	1010
Physics	PHYS	1040	Elementary Astronomy			PHYS	1040	PHYS	1040	PHYS	1040			PHYS	1040	PHYS	1040	PHYS	1040	PHYS	1040
Physics	PHYS	1050	The Solar System	PHYS	1050													PHYS	1050		
Physics	PHYS	1060	Stars and Galaxies	PHYS	1060							PHYS	1060					PHYS	1060		
Physics	PHYS	1070	Cultural Astronomy															PHYS	1070		
Physics	PHYS	1080	Life in the Universe	PHYS	1080	PHYS	1080														
Physics	PHYS	1500	Preparatory Physics	PHYS	1500																
Physics	PHYS	2010	College Physics I	PHYS	2010			PHYS	2010	PHYS	2010	PHYS	2010	PHYS	2010	PHYS	2010	PHYS	2010	PHYS	2010
Physics	PHYS	2015	College Physics I Lab	PHYS	2015			PHYS	2015	PHYS	2015	PHYS	2015	PHYS	2015	PHYS	2015	PHYS	2015	PHYS	2015
Physics	PHYS	2020	College Physics II	PHYS	2020			PHYS	2020	PHYS	2020	PHYS	2020	PHYS	2020	PHYS	2020	PHYS	2020	PHYS	2020
Physics	PHYS	2025	College Physics II Lab	PHYS	2025			PHYS	2025	PHYS	2025	PHYS	2025	PHYS	2025	PHYS	2025	PHYS	2025	PHYS	2025
Physics	PHYS	2210	Physics for Scientists and Engineers I	PHYS	2210	PHYS	2210	PHYS	2210	PHYS	2210	PHYS	2210	PHYS	2210	PHYS	2210	PHYS	2210	PHYS	2210
Physics	PHYS	2215	Physics for Scientists and Engineers I Lab	PHYS	2215			PHYS	2215	PHYS	2215	PHYS	2215	PHYS	2215	PHYS	2215	PHYS	2215	PHYS	2215
Physics	PHYS	2220	Physics for Scientists and Engineers II	PHYS	2220	PHYS	2220	PHYS	2220	PHYS	2220	PHYS	2220	PHYS	2220	PHYS	2220	PHYS	2220	PHYS	2220
Physics	PHYS	2225	Physics for Scientists and Engineering II Lab	PHYS	2225			PHYS	2225	PHYS	2225	PHYS	2225	PHYS	2225	PHYS	2225	PHYS	2225	PHYS	2225
Physics	PHYS	2710	Introductory Modern Physics			PHYS	2710	PHYS	2710			PHYS	2710	PHYS	2710					PHYS	2710
Physics	PHYS	2715	Introductory Modern Physics Lab																	PHYS	2715
Physics	PHYS	3740	Modern Physics	PHYS	3740													PHYS	3740		
Political Science	POLS	1020	Political Ideologies															POLS	1020		
Political Science	POLS	1100	American/US National Government	POLS	1100	POLS	1100	POLS	1100	POLS	1100	POLS	1100	POLS	1100	POLS	1100	POLS	1100	POLS	1100
Political Science	POLS	2100	Introduction to International Relations	POLS	2100	POLS	2100	POLS	2100	POLS	2100			POLS	2100	POLS	2100	POLS	2100	POLS	2100
Political Science	POLS	2200	Introduction to Comparative Politics	POLS	2200	POLS	2200	POLS	2200	POLS	2200			POLS	2200	POLS	2200	POLS	2200	POLS	2200
Political Science	POLS	2300	Political Thought/Ideology	POLS	2300	POLS	2300	POLS	2300	POLS	2300			POLS	2300	POLS	2300	POLS	2300	POLS	2300
Psychology	PSY	1010	Introduction to Psychology	PSY	1010	PSY	1010	PSY	1010	PSY	1010	PSY	1010	PSY	1010	PSY	1010	PSY	1010	PSY	1010
Psychology	PSY	1100	Human Development across the Life Span	FCS	1500	PSY	1100	CHF	1500	PSY	1110	HFST	1500	PSY	1100	PSY	1100	PSY	1100	PSY	1100
Psychology	PSY	1210	Personal Development and Growth			PSY	1210			PSY	1210			PSY	1210	PSY	1210			PSY	1210
Psychology	PSY	1400	Introduction to Experimental Analysis			PSY	1400					PSY	1400								
Psychology	PSY	2200	Ethnicity/Multicultural Psychology							PSY	2200					PSY	2200				
Psychology	PSY	2300	Introduction to Abnormal Psychology					Upper	Div							PSY	2300			PSY	2300
Psychology	PSY	2370	Introduction to Psychology of Gender					PSY	2370	PSY	2370					PSY	2370			PSY	2370
Psychology	PSY	2500	Introduction to Social Psychology					Upper	Div			PSY	2500			PSY	2500			PSY	2500

Major	CCP	CCN	2008 Generic Course Title	UU P	UU N	USU P	USU N	WSU P	WSU N	SUU P	SUU N	Snow P	Snow N	DSC P	DSC N	CEU P	CEU N	UVU P	UVU N	SLCC P	SLCC N	
Psychology	PSY	2710	Introduction to Brain and Behavior					PSY	2710											PSY	2710	
Social Work	SW	1010	Introduction to Social Welfare	SW	1010	SW	1010	SW	1010			SW	1010			SOC	1070	SW	1010	SW	1010	
Social Work	SW	2100	Human Behavior in the Social Environment	SW	2100	SW	2100	SW	2100			SW	2100							SW	2100	
Social Work	SW	2400	Social Work with Diverse Populations			SW	2400	SW	2200			SW	2400									
Sociology	SOC	1010	Introduction to Sociology	SOC	1010	SOC	1010	SOC	1010	SOC	1010	SOC	1010	SOC	1010	SOC	1010	SOC	1010	SOC	1010	
Sociology	SOC	1020	Social Problems	SOC	1020	SOC	1020	SOC	1020	SOC	1020	SOC	1020	SOC	1020	SOC	1020	SOC	1020	SOC	1020	
Sociology	SOC	1200	Sociology of the Family					Upper	Div					SOC	1200					SOC	1200	
Sociology	SOC	2370	Gender Roles			Upper	Div	Upper	Div	SOC	2370					SOC	2910	SOC	2370	SOC	2370	
Sociology	SOC	2400	Soc. Intermountain West																		SOC	2400
Sociology	SOC	2600	Marriage and Family					Upper	Div												SOC	2600
Sociology	SOC	2630	Race and Ethnic Relations							SOC	2630										SOC	2630
Sociology	SOC	2680	Sociology of Aging			Upper	Div														SOC	2680
Special Education	SPED	2010	Into to Special Education	SPE	3010	SP	4000	EDUC	2010	SPED	3030			EDUC	2010			EDSP	3400	EDU	2010	
Theater	THEA	1013	Survey of Theater/Introduction to Theatre	THEA	1013	THEA	1013	THEA	1013	THEA	1013	THEA	1013	THEA	1013	THEA	1013	THEA	1013	THEA	1013	
Theater	THEA	1023	Introduction to Film	THEA	1023	THEA	1023	THEA	1023	THEA	1023	THEA	1023	THEA	1023	THEA	1023	THEA	1023	THEA	1023	
Theater	THEA	1033	Acting I	THEA	1033	THEA	1033	THEA	1033	THEA	1033	THEA	1033	THEA	1033	THEA	1033	THEA	1033	THEA	1033	
Theater	THEA	1113	Voice and Diction			THEA	1113	THEA	1030	THEA	1113			THEA	1113	THEA	1113	THEA	1113	THEA	1113	
Theater	THEA	1223	Make-up	THEA	1223	THEA	1223	THEA	1223	THEA	1223	THEA	1223	THEA	1223	THEA	1223	THEA	1223	THEA	1223	
Theater	THEA	1513	Stage Craft			THEA	1513			THEA	1513	THEA	1513	THEA	1513	THEA	1513	THEA	1513	THEA	1513	
Theater	THEA	1713	Script Analysis	THEA	1713	THEA	1713	THEA	1713	THEA	1713			THEA	1713	THEA	1713	THEA	1713	THEA	1713	
Theater	THEA	2033	Acting II	THEA	2033	THEA	2033	THEA	2033	THEA	2033	THEA	2033	THEA	2033	THEA	2033	THEA	2033	THEA	2033	
Theater	THEA	2203	Costume Construction	THEA	2203			THEA	2203	THEA	2203	THEA	2203	THEA	2203			THEA	2203			
Theater	THEA	2443	Acting for Musical Theater			THEA	5440	THEA	2443											THEA	2443	
Theater	THEA	2513	Introduction to Design											THEA	1170	THEA	2510	THEA	2513	THEA	2513	
Theater	THEA	?	Theater History and Literature			THEA	3230	THEA	3303	THEA	3713	THEA	1031 1032	THEA	3720							

January 7, 2009

MEMORANDUM

TO: State Board of Regents

FROM: William A. Sederburg

SUBJECT: Information Calendar: Academic, Career and Technical Education and Student Success (Programs) Committee

The following have been submitted for consideration by the Regents on the Information Calendar of the Programs Committee.

A. *University of Utah –*

i. *Name Change: MS in Human Development and Social Policy from MS in Family Ecology*

Request: The University of Utah requests to change the name of the master's degree offered by the Department of Family and Consumer Studies (FCS) to "Human Development and Social Policy" (HDSP) from "Family Ecology," effective immediately.

Need: The present name of the master's degree – family ecology – does not fully describe the current program of study. Over the last decade, the changing composition and interests of the FCS faculty have led to significant changes in the content of graduate courses. The core courses, for example, are no longer focused exclusively on the family, and a significant social policy emphasis has been added to each of them. Furthermore, the word "ecology" has many divergent connotations and has fallen out of use as a degree name at other institutions in departments similar to FCS.

There was unanimous agreement among FCS faculty in support of the proposed name change to Human Development and Social Policy. Knowledge of human development informs social policy; in turn, social policies influence the contexts of human development. The proposed name better reflects the intent of the FCS master's degree to provide students with an interdisciplinary understanding of important issues and policies in family, community and societal life. One other institution currently offers a master's and doctoral degree in Human Development and Social Policy – Northwestern University. The FCS faculty considers the Northwestern program an excellent and highly successful model.

Finally, the proposed name change will more effectively communicate the goals of the FCS graduate program to prospective students and provide graduates of the program with a degree that has broader relevance in the job market than one in family ecology.

Institutional Impact: Changing the name of the FCS master's degree will not adversely affect the faculty, facilities, or administrative structures in the department. One additional graduate course with an emphasis on human development is being planned; however, this curricular change was already taking place.

The name change will not adversely affect enrollments in other departments or instructional programs at the University of Utah. The Department has always had a strong focus on human development, and the social policy content in FCS graduate courses has been present for approximately 10 years. It is anticipated that the HDSP master's program will enhance student and faculty collaboration between the FCS department and other university programs that are engaged in more detailed policy analysis (e.g., the Master of Public Policy (MPP) program and the Institute of Public and International Affairs (IPIA)).

Finances: There are no significant costs associated with this name change. Advertising and informational materials (e.g., the FCS website) are usually updated every year and will be changed after approval.

ii. *New Department: Operations and Information Systems (OIS)*

Request: University of Utah (U of U) requests approval to create a new Department of Operations and Information Systems effective spring 2009.

The David Eccles School of Business (DESB) currently has four departments: Accounting and Information Systems, Finance, Management and Marketing. These four departments offer six undergraduate degrees (accounting, finance, entrepreneurship, information systems, management and marketing). As is evident from its name, the School of Accounting and Information Systems consists of two distinct areas. Similarly, the Management Department consists of several distinct areas, one of which is Operations Management (OM). Due to mutual research and teaching interests and associated synergies, the U of U proposes the combination of the Information Systems (IS) and Operations Management (OM) groups into a new department called Operations and Information Systems (OIS).

In conjunction with the proposal to create a new department, a new major in OM and a new master's degree in IS are proposed (proposals provided separately). There is already an IS undergraduate major, which should move to the new OIS department; hence the new department will offer BS degrees in both IS and OM. Similarly, the PhD degrees that are now offered in IS and OM through existing departments should be moved to the new OIS Department.

Need: There is growing demand for graduates in both IS and OM. The state of Utah and the region are seeing growth in manufacturing, technology and service firms that have a need for a workforce schooled in operations and information systems management.

The core of IS knowledge focuses on understanding the principles and application of information and technology fundamental to creating business values, enable business strategies and empower other business functions. OM is concerned with converting inputs to outputs in a way that adds value. Such conversion takes place within processes and as such operations management is concerned with process management and improvement. Almost all major companies have complex operations which need to be managed well to maximize company profits.

The synergies between IS and OM have existed in academia and industries since the inception of the IS programs about 35 years ago have only become stronger. The mathematical and conceptual foundations

for the two areas are similar, including analytic knowledge of optimization and statistics. Moreover, faculty members of the two groups attend similar national conferences and publish in each other's academic journals, which their colleagues in the current structures do not do so consistently. This structure will allow better program decisions to be made. The proposed structure will also be more attractive to potential faculty recruits, prospective students and recruiters.

The proposed move is necessary to stay competitive with top business schools. Most top schools have either separate programs in IS or OM, or they have combined departments. The combination of IS and OM makes sense on many levels, which top business schools have recognized and implemented.

Benchmarking the top 57 undergraduate business programs in the nation (US News & World Report the America's Best Colleges 2008: Best Undergraduate Business Programs), there are 22 schools where OM and IS faculty are in a merged academic department.

By combining, opportunities for research collaboration will expand. By combining resources, the delivery of material should be more efficient, which will allow courses that have not been offered before. The synergies in research should allow leverage of current strengths and improve national and international recognition and visibility of the department, school and university. Hopefully, faculty in the new department will be able to participate more fully in executive education benefitting the local business community.

Institutional Impact: Because IS and OM already exist within the Management Department, the transition to the new department will cause minimal disruption. Combining the areas into one department will allow the department to take advantage of logical synergies in terms of common student preparation.

By July 1, 2008, there were five regular, tenure-track and three full-time contract faculty members in IS. Similarly, there were five regular, tenure-track and one full-time contract faculty members in OM, and there is a search for a sixth tenure-track OM faculty member. The faculty size is currently sufficient to offer the degrees that are in place or are proposed. The increased tuition-to-program revenue resulting from the increasing program sizes will provide funding for additional hires if necessary.

The department will need one administrative assistant and possibly a part-time executive. The support from an administrative assistant will be provided by reallocating the responsibilities of a staff member currently serving in the school. Thus, no new hires are anticipated in the foreseeable future. The School of Business provides undergraduate student advisors and master's program advising support.

Because both the IS and the OM groups have been part of existing programs, library and information systems resources are already in place. Those resources are able to meet both research and teaching needs of the new department.

No outside consultants were involved in the development of the program. An advisory board from industry is possible in the future to assist in curriculum review and development. The board of advisors could also provide internship and placement opportunities and carrier advice to students. As part of the David Eccles School of Business, the new department will be part of a School review by the Association to Advance Collegiate Schools of Business (AACSB). The next review that the School will be subject to is in 2009.

Finances: The program will be funded mainly through the SCH model at the University as well as differential tuition. Because OM classes are in place, the student credit hours are already in place and have grown over the last few years. The SCH generated by the current OM classes will be reallocated to the new

department (and hence major) and those generated by IS will be moved from the current School of Accounting and Information Systems to the new department.

As the programs grow and students complete their degrees, alumni contributions are an anticipated small flow of revenue. The Dean's office currently allocates \$100K a year for Presidential Chair's supplement. This will increase to \$200K within the next five years when the new department recruits the second Presidential Chair. The IS faculty will continue to expand their fund raising for providing student scholarships, internships and career opportunities.

Financial Analysis Form					
	Year 1	Year 2	Year 3	Year 4	Year 5
Students					
Projected FTE Enrollment	258	281	296	318	333
Cost Per FTE					
Student/Faculty Ratio	10.6 : 1	11.9 : 1	12.7 : 1	14.7 : 1	16 : 1
Projected Headcount	149	186	228	279	320
Projected Tuition					
Gross Tuition					
Tuition to Program	\$2,465,000	\$2,612,900	\$2,769,674	\$2,935,854	\$3,112,006

5 Year Budget Projection					
	Year 1	Year 2	Year 3	Year 4	Year 5
Expense					
Salaries & Wages	2,050,000	2,291,500	2,478,445	2,496,998	2,745,728
Benefits	164,000	200,120	215,076	220,880	236,458
Total Personnel	2,214,000	2,491,620	2,693,521	2,717,878	2,982,186
Current Expense	120,000	120,000	125,000	125,000	130,000
Travel					
Capital					
Library Expense					
Total Expense	\$2,334,000	\$2,611,620	\$2,818,521	\$2,842,878	\$3,112,186
Revenue					
Legislative Appropriation					
Grants & Contracts	\$10,000	\$20,000	\$40,000	\$60,000	\$80,000
Donations					
Reallocation	\$100,000	\$100,000	\$200,000	\$200,000	\$200,000
Tuition to Program	\$2,465,000	\$2,612,900	\$2,769,674	\$2,935,854	\$3,112,006
Fees					
Total Revenue	\$2,575,000	\$2,732,900	\$3,009,674	\$3,195,854	\$3,392,006
Difference					
Revenue-Expense	\$241,000	\$19,280	\$89,153	\$13,376	(\$5,780)

The personnel expenses assume the addition of six faculty over the next five years. The revenue numbers combine SCH-related income and differential tuition. Included is the total enrollment-related revenue without trying to break it out as separate line items. The assumption is that revenue will grow at 6 percent per year, which is conservative given the assessment of demand for both OM and IS majors, an added MS in IS, and differential tuition allocated to the new department. Based on the budget projection, the department is expected to generate \$357,029 accumulative surplus at the end of five years.

The budgets of the Management (MGT) and Accounting (ACCT) departments will be affected by the new departments. A portion of SCH that have currently gone to the Management and Accounting departments will now flow to the new department. As such, the Management and Accounting department's revenue will decrease. While the revenue will decline, it is also true that the two existing departments' costs will also decrease as several faculty members will be leaving to the new department.

iii. *Name Change: MS/PhD in Civil and Environmental Engineering from MS/PhD in Civil Engineering*

Request: The University of Utah requests that names of the Doctor of Philosophy and the Master of Science in Civil Engineering be changed, respectively, to the Doctor of Philosophy and Master of Science in Civil and Environmental Engineering.

Need: Several years ago, the name of the department was changed from Civil Engineering to Civil and Environmental Engineering. The degree names should have been changed at that time, but were not. This request is to rectify the situation.

Institutional Impact: There will be no institutional impact.

Finances: No cost is anticipated.

iv. *Name Change: MS/PhD in Electrical and Computer Engineering from MS/PhD in Electrical Engineering*

Request: The University of Utah requests that names of the Doctor of Philosophy and the Master of Science in Electrical Engineering be changed, respectively, to the Doctor of Philosophy and the Master of Science in Electrical and Computer Engineering.

Need: Several years ago, the name of the department was changed from Electrical Engineering to Electrical and Computer Engineering. The degree names should have been changed at that time, but were not. This request is to rectify the situation.

Institutional Impact: There will be no institutional impact.

Finances: No cost is anticipated.

v. *Name Change: MS/PhD in Pharmacology and Toxicology from MS/PhD in Pharmacology*

Request: The University of Utah requests that names of the Doctor of Philosophy and the Master of Science in Pharmacology be changed, respectively, to the Doctor of Philosophy and the Master of Science in Pharmacology and Toxicology.

Need: Several years ago, the name of the department was changed from Pharmacology to Pharmacology and Toxicology. The degree names should have been changed at that time, but were not. This request is to rectify the situation.

Institutional Impact: There will be no institutional impact.

Finances: No cost is anticipated.

B. *Weber State University –*

i. *Name Change: the School of Nursing from the Department of Nursing*

Request: The Weber State University (WSU) nursing department proposes a name change from the Department of Nursing to the School of Nursing. This name change reflects both the growth and evolution of the program. Additionally, the name change is consistent with practices nationally.

The WSU Department of Nursing, founded in 1953, offers programs in Practical Nursing (PN, certificate) and Nursing (RN, associate of science; BSN, bachelor of science; and MSN, master of science). The department's ladder curriculum allows students to progress through these levels according to their individual abilities, aspirations, career goals, and life circumstances. The WSU Nursing program is fully accredited by the National League for Nursing Accrediting Commission (NLNAC).

The WSU associate's degree nursing program has been offered by WSU at cooperative campuses located throughout the state including Utah State University in Logan, Salt Lake Community College in Salt Lake City, Southern Utah University in Cedar City, and Dixie State College in St. George. Two of these campuses, USU and SUU, continue to have cooperative nursing programs with WSU. In fulfilling its state-wide nursing education mission, WSU nursing outreach programs continue to be offered throughout Utah's rural communities, including Tooele, Richfield, Roosevelt/Vernal, Payson, Price, Delta, and Panguitch.

Virtually all WSU nursing students are placed in nursing positions immediately after graduation. WSU nursing students participate in a wide variety of clinical practice environments, including acute care settings, health screening clinics, acute and chronic psychiatric facilities, homecare, and hospice. The program offers numerous scholarships to matriculated nursing students.

Need: A change in the designation from a Department of Nursing to a School of Nursing would benefit the nursing department by bringing it in line with similar nursing schools. Nationally, most nursing programs are housed in schools of nursing; this especially true for nursing programs that offer associate's, bachelor's, and graduate degrees. This change would align the WSU Dumke College of Health Professions, School of Nursing with other nursing programs nationally, making the program more attractive to potential faculty and students, and thus enhance the ability to recruit a diverse faculty and student profile.

Institutional Impact: This request is for a change in name and will not affect the existing administrative structure in the Dumke College of Health Professions. The current Nursing operations would remain with the identical organizational structure within the College of Health Professions. No new physical facilities or equipment would be required.

Finances: There are no costs associated with this request. There are no budgetary impacts on any other programs or units in the institution.

ii. Program Review: Department of Botany

Reviewers

- Jim Farrar, PhD (Team Leader), Department of Plant Science, California State University, Fresno
- Paul Cox, PhD, Institute for Ethnomedicine, Jackson, Wyoming
- Jeff Eaton, PhD, Department of Geosciences, Weber State University
- Molly Smith, PhD, Department of Health Promotions and Human Performance, Weber State University

Program Description: The Weber State University Department of Botany seeks to provide effective education and communication about the value and intellectual appeal of plants and to offer students experience in laboratory and field-based research in preparation for government and industry careers or advanced academic pursuits in plant biology.

Botany plays an important role in delivering a liberal arts experience through relevant general education courses to non-majors and trains major and minor students for employment in botanically related sub-disciplines or graduate studies.

The Botany program at WSU is the only such program remaining in the state of Utah. While the program is small when compared to other science programs at WSU, it is relatively large when compared nationally.

Faculty & Staff

	Tenure	Contract	Adjunct
Number of faculty with Doctoral degrees	6		
Number of faculty with Master's degrees			2
Number of faculty with Bachelor's degrees			
Other Faculty			
Total	6		2

Students

Ay	# of Majors	Student FTE	# of Faculty	FTE-To-Faculty Ratio	# of Grads	# of Grads Placed
04	53	197	8	26	1	1
05	51	188	5	24	3	3
06	59	172	8	21	9	9
07	60	139	8	18	5	5
08	32	145	7	19	8	8

Finances

Botany	2003-04	2004-05	2005-06	2006-07	2007-08
Total E&G Revenue	558,528	586,064	615,359	632,061	655,283
Total Grant Revenue	0	0	0	0	0
Total Revenue	558,528	479,297	615,359	632,061	655,283
Instructional Expenses	462,687	479,297	513,336	542,174	568,808
Support Expenses	94,818	105,939	101,382	89,208	86,195
Other Expenses	1,023	828	641	679	280
Total E&G Expense	558,528	586,064	615,359	632,061	655,283
Total Grant Expense	0	0	0	0	0
Net Revenue-Expense	0	0	0	0	0

Program Assessment

Strengths of Botany Program Identified by the Review Team

The Botany Department is composed of excellent teachers, who have a genuine desire for the students to learn botany and love plants. In private meetings with students, the visiting committee was stunned at the enthusiasm the students have for their botanical studies and for the remarkable esteem in which they hold the botany faculty. This department offers a remarkable diversity of high quality courses while operating the greenhouse, maintaining a herbarium collection, and undertaking research. The faculty is collegial to each other and the university faculty at large. Dr. Bozniak is to be commended for assembling a remarkable staff.

The Botany Department is unique in Utah and one of the few strong Botany departments in the nation. Dr. Bozniak frequently comments that WSU's Botany Department is the sixth largest in the nation, but this claim gains more significance when it is realized that WSU, unlike the other institutions with botany departments, has no graduate program. The department offers a solid undergraduate education in basic botany. Tracks A and B are distinct and prepare students with the knowledge and skills appropriate to the botany employment outlooks in Utah. The review committee recognizes the importance of not only maintaining this unique program, but seeing it develop and grow in the future.

The herbarium at WSU is superbly curated and represents well the flora of northern Utah. It was pleasing to the visiting committee to note that the herbarium is contiguous to laboratory areas and the student lounge, facilitating easy exploration of plant diversity by students.

This is a student-friendly department. All the Botany majors love this department. They feel that the faculty are personally invested in their intellectual development and that the interaction of the faculty and students feels like that of an extended family. They appreciate that classes are scheduled to not conflict with other classes in the department and required classes in supporting departments. Most students felt the portfolio was a significant investment of time and effort but was worthwhile.

Challenges for Botany Department Identified by Review Team

Department visibility and marketing to high school students and general education students at the university continues to be a challenge. Lack of visibility negatively impacts department student credit hours and the number of majors. This is not unique to the Botany Department at WSU, but is part of a national trend in plant biology departments. Students do not know what botany is and what kinds of career opportunities are available to botany majors.

The Botany Department has done an effective job of cobbling together equipment from various sources to develop effective teaching labs. However, the need for new equipment outpaces resources. This is particularly true for applied molecular biology and molecular genetics techniques. In addition, as the university moves toward increased research expectations of faculty, additional resources will be required to obtain and maintain research quality equipment. The department has reached limits in terms of space, particularly in terms of the laboratory, greenhouse, and herbarium. While the Botany Department has done a good job of maintaining current resources, more space and equipment are desperately needed.

The current semester schedule is a challenge for integrating field aspects of the taxonomy, ecology, and field botany courses. The spring semester is ending just as plants are beginning to flower in Utah.

The Department receives inadequate support from Facilities Management and Technology Support. This failure negatively impacts the ability of the faculty to teach students. Since this is the primary mission of

WSU, this problem is significant. The Department receives inadequate post-award support from the Office of Sponsored Programs. Faculty need assistance in accounting for grant expenses and disbursements.

The Department currently shares one-half a secretary; the other half of her time is spent in the Microbiology Department. When the secretary is not in the Botany Office, the Department Chair becomes the first point of contact for students and visitors. This is an inefficient use of resources since the Chair is often interrupted in his work for relatively mundane problems that could easily be handled by the secretary.

Although some faculty have maintained strong research programs, in general faculty research has waned over the last decade. With current course loads and other duties there is little time for research, grant writing, or growth of the herbarium. This can have a negative impact on mentoring undergraduate students.

Institutional Response to the Review Team Report

Recruitment will need to be addressed by the College of Science as well as at the department level. The department is prepared to entertain expanded opportunities for recruitment especially those involving the Botany Club. Club members could assist the faculty in taking programs to local schools to give students at all grade levels an opportunity to understand what Botany is and what one could do with a Botany degree. Perhaps the faculty advisor could be given some release time to coordinate such club activities, including preparing media materials and leading short field experiences for grade school students on Saturdays.

With respect to increasing the visibility of Botany on campus, the Botany Club could lead additional field trips besides the current ones to the Uinta Mountains and Antelope Island. Club members could also partner with other department clubs to host open house activities and cooperate with the Ogden Nature Center to sponsor wildflower walks. The Natural History Museum offers a venue with high K-12 traffic.

Displays other than the cactus/succulent garden would provide visibility. The last S4 meeting featured undergraduate research presentations. If undergraduates could give more of the presentations (like four undergraduates instead of a single speaker at a meeting), all departments could get more notice. These presenters could include greenhouse workers, the planetarium volunteers, the SCME and Science Fair students, various club officers, etc. describing what they do as undergraduates in the College. Graduating students brought up the idea of getting more "teaching" experience during their senior year. At a strictly undergraduate institution, opportunities are somewhat limited, but faculty are entertaining the idea of involving more students in a few beginning laboratories. Getting the experience as part of a coordinated recruitment program is also being seriously contemplated.

The Botany Department's student credit hours have declined over the past 4 years, with an approximate 20 percent drop between 2005-06 and 2006-07; the decrease over the past 4 years has been almost 30 percent. This decline is largely due to the decrease in enrollments in the general education component. At the same time the number of graduates has increased from 0 in 2002-03 to 11 in 2005-06, down again to 5 in 2006-07. These numbers are consistent with statistical fluctuations in the graduation rates of a small but steady number of total declared majors over the same period (varying between 51 and 60).

In order to address the declining student credit hour issue in Botany, and the desire to increase enrollments in all College of Science programs, the College has an active publicity and recruitment committee with representation from every department. The committee has recently revised recruitment materials that are provided to the recruitment office and assisted in updating departmental and college web pages. Also, a

monthly College of Science E-Newsletter is published out of the Dean's office, which features one department or program in each issue.

The College of Science Chairs' Council began a conversation this past spring about developing new general education offerings that meet the recently revised and adopted Life Science and Physical Science general education goals and criteria. This conversation will continue and will integrate with the campus-wide conversation regarding general education assessment. It is of vital importance that graduates of WSU develop a deeper understanding of and appreciation for science and mathematics, and that the number of students majoring in the sciences and mathematics increase. This is a national issue. As documented in myriad state and national reports, the low level of understanding and expertise in STEM fields (Science, Technology, Engineering, and Mathematics) is at a crisis level for the nation in terms of maintaining a competitive advantage in the world economically, technologically, and scientifically.

Space and equipment are issues of concern to the entire College. More equipment has not been pushed for in Plant Physiology and Plant Genetics because these courses lack enrollments. Plant Genetics and Plant Physiology have frequently been cancelled since the institution of the track options, so there was no point in spending limited resources on classes that exist so infrequently. Equipment is slowly being added to the department but an increased infusion of resources will be necessary in order to keep pace with research demands. The Department of Botany will take seriously the review team's recommendation regarding more aggressive efforts in concert with the Development Office to search for corporate support.

The lack of coordination between the semester system and the local patterns of plant growth has been an issue since semester conversion. The idea of a summer field camp has been discussed off and on for years; however, there was an unsuccessful attempt to develop such a program during the 80s. The major concern with a summer field school is that it combines overloaded faculty with a low enrollment offering.

With a growing focus on external funding, WSU has completed a search for a new director of the Office of Sponsored Projects. It is anticipated that the new director will enhance the support provided to grant writers in the College of Science and across the campus. The College of Science Chairs' Council has also discussed the possibility of hiring an individual that will support grant writing and post-award support. This decision is pending based on the direction and support of the Office of Sponsored Projects.

Finally, the Chairs' Council has determined that it is important to support a College of Science information technology specialist. Although this individual will have significant responsibility for support of the geographic information systems laboratory in Geosciences and the 132-node supercomputer in Physics, the individual will also be available to support IT needs across all College of Science departments. A search committee has been organized to conduct the search that reflects the interdisciplinary requirements of the position, with the expectation that a person will be hired during spring semester 2009, pending the outcome of the Legislature regarding budget cuts.

iii. Program Review: Department of Chemistry

Reviewers

- Thomas G. Richmond, Associate Professor of Chemistry, University of Utah
- Mark Pugh, Professor of Chemistry, Associate Dean, Honors College, Brigham Young University-Idaho
- Brent Horn, Assistant Professor of Criminal Justice, Weber State University
- Karen Nakaoka, Professor of Microbiology, Weber State University

Program Description: The mission of the Chemistry Department is to provide chemistry majors with the chemical skills and knowledge they need to successfully pursue their chosen professional careers and activities following graduation from Weber State University. Included with this goal is the more global application to provide a solid foundation in theoretical chemistry and experimental techniques for other majors across campus including but not limited to Physics, Microbiology, Botany, Zoology, Geoscience, Criminalistics, Allied Health, and Engineering. The Department is also committed to providing a solid chemical background for all pre-professional students; a general liberal education in chemistry for non-science majors; and service that requires chemical expertise to the University and community.

Much of the curriculum within the Department of Chemistry serves general education needs of other disciplines. In addition, faculty members within the Chemistry Department have identified and itemized a list of cognitive and technical skills desired of all graduating chemistry majors. The department has identified the individual courses within the curriculum that develop these skills or outcomes. The Chemistry Department has a formalized teaching assessment program and compiles data annually. The assessment of student learning outcomes usually impacts individual courses. The American Chemical Society's Committee on Professional Training has recently revised their suggested bachelor's degree curriculum. The program will evaluate its current curriculum and will make changes to align with the new requirements.

Faculty & Staff

	Tenure	Contract	Adjunct
Number of faculty with Doctoral degrees	12		
Number of faculty with Master's degrees			
Number of faculty with Bachelor's degrees			
Other Faculty			
Total	12		

Students

Ay	# of Majors	Student FTE	# of Faculty	FTE-To-Faculty Ratio	# of Grads	# of Grads Placed
04	98	579	24	24	26	26
05	83	559	24	24	19	19
06	156	530	24	22	14	14
07	105	485	25	19	22	22
08	117	466	24	20	26	26

Finances

Chemistry	2003-04	2004-05	2005-06	2006-07	2007-08
Total E&G Revenue	1,115,238	1,170,483	1,244,224	1,273,008	1,317,745
Total Grant Revenue	549	298	71	0	0
Total Revenue	1,115,787	1,170,781	1,244,295	1,273,008	1,317,745
Instructional Expenses	922,990	965,242	1,030,551	1,063,152	1,136,883
Support Expenses	192,248	205,251	213,673	209,856	180,862
Other Expenses	0	0	0	0	0
Total E&G Expense	1,115,238	1,170,483	1,244,224	1,273,008	1,307,745
Total Grant Expense	549	298	71	0	0
Net Revenue-Expense	0	0	0	0	0

Program Assessment

Strengths of Chemistry Program Identified by the Review Team

- Faculty commitment to education and their students.
- Strong relationships between faculty and students.
- Strong core base of faculty in all fields of chemistry.
- Innovative online chemistry courses at the 1000-level.
- CTC is an innovative way of interacting with the local business/technology community.
- Associate's degree program imbedded in BS program provides useful waypoint for students.

Challenges for Chemistry Department Identified by Review Team

- Lack of modern and functional laboratory equipment required for teaching and undergraduate research.
- Lack of mentoring of junior faculty.
- An inherent conflict between research and full-load teaching (12 hr).
- Achieve a department and college consensus as to research, student credit hour, and scholarship expectations for tenure and promotion.

Institutional Response to the Review Team Report

The need for modern research and teaching equipment in the Department is one that has been and continues to be a concern. This issue is an ongoing concern for the entire College of Science. Current funding is far too limited to support the many expensive pieces of equipment that are required of modern laboratory programs in the life and physical sciences. However, significant progress has been made in this area in the past couple of years, and it continues to be a point of major focus for the College as a whole.

Equipment that has recently been, or is about to be, purchased that is specifically dedicated to or available for use by the Department of Chemistry includes a 90 MHz FT-NMR (an NMR is required by the new ACS certification requirements), a gas chromatograph/mass spectrometer, an X-Ray diffractometer, and an environmental scanning electron microscope with an energy dispersive X-Ray spectrometer. The College of Sciences expenses for these instruments total ~\$500,000. In addition, a 132-node supercomputer cluster is also available for the College of Science, valued at ~\$250,000. It is not anticipated that this level of funding be provided routinely, so it is imperative that the Department search for other funding sources, including notably increased grant writing and perhaps increases in student fees for its laboratory programs.

The College of Science Chairs' Council has been discussing the research to teaching ratio and plans to revisit it during fall 2008. The issue is becoming increasingly important to the College given the growth in undergraduate research; the conservative policy of providing 0.25 TCH per student credit hour, which is far

too restrictive for the time-intensive mentoring required of undergraduate research; and the importance of supporting active research programs for faculty interested in remaining current in their disciplines, which is fundamental of excellent teaching in the rapidly evolving disciplines of the life and physical sciences.

The Dean anticipates that a formal policy regarding time for research, student credit hours, and scholarship activities will emerge from discussions. It must be pointed out, however, that the ability of faculty in the Department of Chemistry to pursue research activities is not only impacted by equipment and space needs, and by the 12 TCH teaching load, but it is also impacted by the significant amount of overload teaching that occurs in the Department. The Department's participation in overload teaching far exceeds that of any other department in the College. While it is understandable that the additional income is helpful, and much of the teaching is in support of the evening and summer programs, overload teaching should not supersede the fundamental faculty expectations of teaching, research, and service. In addition, it may become a significant issue for ACS certification of their BS option I degree, given the new requirements adopted in spring 2008, if the number of hours that Chemistry faculty teach is not reduced. It may be possible to identify an additional faculty line for the Chemistry Department in the next few years should the willingness of the faculty to increase research activities with undergraduates be clearly established. This would also be consistent with the Department's recent adoption of research requirements for their degree programs, together with the new emphasis on undergraduate research in the ACS criteria.

Tenure requirements specific to the College of Science are identified in the tenure document approved by the Faculty Senate on March 27, 2003. If there is uncertainty about tenure requirements, rather than consider revisions of the Policies and Procedures Manual and/or the current College of Science tenure policy, the Dean suggests that a more deliberate and proactive mentoring process is advisable for faculty during their probationary period, clearly identifying the requirements for tenure. It is important that faculty understand the importance of establishing research programs early in their time at WSU, and the time-management implications that are associated with an active research program.

The Dean emphasizes discussing tenure expectations with faculty during the hiring process. A modest amount of start-up funding is provided to new faculty to help them establish research programs at WSU. Although the start-up funding has been modest at best, the provost has been able to provide additional funding for life and physical science faculty beginning in 2008-09. The Dean is also working on strategies to further improve start-up packages.

With a growing focus on external funding, WSU has completed a search for a new director of the Office of Sponsored Projects. It is anticipated that the new director will enhance the support provided to grant writers in the College of Science and across the campus. The College of Science Chairs' Council has also discussed the possibility of hiring an individual that will support grant writing and post-award support. This decision is pending based on the direction and support of the Office of Sponsored Projects.

Finally, the Chairs' Council has determined that it is important to support a College of Science information technology specialist. Although this individual will have significant responsibility for support of the geographic information systems laboratory in Geosciences and the 132-node supercomputer in Physics, the individual will also be available to support IT needs across all College of Science departments. A search committee has been organized to conduct the search that reflects the interdisciplinary requirements of the position, with the expectation that a person will be hired during spring semester 2009, pending the outcome of the Legislature regarding budget cuts.

iv. Program Review: Department of Geoscience

Reviewers

- John Shervais, Department of Geology, Utah State University
- Kip Solomon, Department of Geology and Geophysics, University of Utah
- Eric Ewert, Department of Geography, Weber State University
- Colin Inglefield, Department of Physics, Weber State University

Program Description: The Department of Geosciences at Weber State University provides a quality undergraduate education in the Earth sciences. It seeks to provide an enriched learning environment through extensive interaction between faculty and students, emphasis on field studies and practical applications, use of technology-enhanced instruction, and mentoring of undergraduate research. The department offers majors in Geology, Applied Environmental Geosciences, and Earth Science Teaching; minors in Geospatial Analysis, Geology, and Earth Science Teaching; and a certificate in Geomatics. These programs provide students with the essential knowledge and skills needed to qualify them for additional education or employment.

The department contributes to the broader mission of the University by providing general education courses that enhance students' awareness, appreciation, and understanding of the physical environment and the scientific process. In order to promote faculty vitality and increase scientific knowledge, the department encourages faculty to engage in basic and applied research. Faculty also provide professional expertise in the Earth sciences to the community and public school system. The Department seeks to continue building a solid base of personnel and facilities to serve WSU and northern Utah.

Faculty & Staff

	Tenure	Contract	Adjunct
Number of faculty with Doctoral degrees	6		
Number of faculty with Master's degrees			
Number of faculty with Bachelor's degrees			
Other Faculty			
Total	6		

Students

Ay	# of Majors	Student FTE	# of Faculty	FTE-To-Faculty Ratio	# of Grads	# of Grads Placed
04	53	164	9	18	10	10
05	59	169	9	19	7	7
06	59	162	9	19	10	10
07	58	154	9	18	29	29
08	67	145	8	17	12	12

Finances

Geosciences	2003-04	2004-05	2005-06	2006-07	2007-08
Total E&G Revenue	558,528	586,064	615,359	632,061	655,283
Total Grant Revenue	16,888	20,412	42,701	69,010	69,808
Total Revenue	575,416	606,476	658,060	701,071	725,091
Instructional Expenses	412,416	436,548	568,479	508,651	550,979
Support Expenses	51,692	53,595	2,444	64,530	0
Other Expenses	1,000	0	2,900	1,223	0
Total E&G Expense	558,528	586,064	615,359	632,061	655,283
Total Grant Expense	16,888	22,412	42,701	69,010	69,808
Net Revenue-Expense	0	0	0	0	0

Program Assessment

Strengths of the Geosciences Program Identified by the Review Team

- This is clearly a well qualified, dedicated, productive, and collegial faculty, who ably balance teaching with research and service.
- The department's students enjoy success: performing research, participating in internships, finding employment, and getting accepted into graduate programs.
- The curriculum integrates traditional geology with geospatial analysis, environmental applications, close student-faculty interaction, numerous field experiences, modern technology, and laboratory work.

Challenges for the Geosciences Department Identified by Review Team

- Staffing is the single greatest challenge facing the department. Most faculty teach full loads and often overload, pursue robust scholarship agendas, maintain considerable collections of lab specimens and equipment, and lead fieldtrips or direct fieldwork and internships. Additionally, the faculty do a considerable amount of busy work, wasting time and expertise on administrative duties (secretarial paperwork), organizing lab collections (getting out and putting away rocks, minerals, and fossils), and maintaining computers (hardware, software, printers, I.T.). This is especially glaring in the GEAR lab.
- While not abundant, the review team deemed the department's space as currently adequate. However any future growth in faculty or staff positions or acquisition of major new equipment will require additional space. Given the time required to complete construction, priority should be given to planning and obtaining funding for Phase II of the Science Lab Building.
- As noted above, while the department has successfully improved laboratory and teaching facilities with modern equipment and technology, the routine and time-consuming maintenance duties fall exclusively to faculty. Of particular importance is the need for consistent, high-quality computer support, which could be accomplished by hiring a college computer technician. Additionally, one faculty member often has to use his own vehicles to support field excursions and defray costs.

Institutional Response to the Review Team Report

The Chairs' Council has determined that it is important to support a College of Science information technology specialist. Although this individual will have significant responsibility for support of the geographic information systems laboratory in Geosciences and the 132-node supercomputer in Physics, the individual will also be available to support IT needs across all College of Science departments. A search committee has been organized to conduct the search that reflects the interdisciplinary requirements

of the position, with the expectation that a person will be hired during spring semester 2009, pending the outcome of the Legislature regarding budget cuts.

The Dean has also been in conversation with the Chair of the Department of Geosciences regarding the future change in appointment of the secretarial position from one-half time to either three-quarter or full time. The Dean supports this increase and it is anticipated that the change will occur with the hiring of a new secretary in the near future. Unfortunately, it seems unlikely that a lecturer/laboratory manager will be able to be supported within the next several years. At the present time there are two other significant staff positions that need to be established within the College of Science collectively.

The College of Science Chairs' Council has been discussing the possibility of creating an Associate Dean or an Assistant to the Dean position that will support Principle Investigators with grant writing and post-award support along with general budgetary support responsibilities. This decision is pending, based on the future direction and support of the Office of Sponsored Projects now that a new director has been hired effective July 1, 2008. The Chairs' Council also believes that it would be extremely helpful to also support the hiring of an equipment maintenance staff specialist; unfortunately with the many needs in the College, it is unlikely that such an individual will be able to be funded through E&G support in the near future. However, should significant indirect cost capture be possible through grant writing or perhaps if another funding stream could become available from other sources, such a position may be considered on "soft money." This position would certainly assist with some of the equipment needs in the Department of Geosciences, as their instrumentation maintenance needs continue to increase, although it is hoped that the future hire of an IT specialist can help in this area to some degree.

The review team mentioned that the "success in research is especially laudable given [the faculty's] standard teaching load" of 12 TCH per semester. The Department has acknowledged "faculty are being stretched to the limit with many teaching overloads (including unpaid overload for summer field camp), mentoring undergraduate research, managing budgets, and having to do computer IT activities." While many of these issues have already been discussed above, the issue of mentoring undergraduate research must also be addressed in a sustainable fashion. The College of Science Chairs' Council has been discussing the issue and plans to revisit it in a more focused way during Fall Semester 2008.

The issue is becoming increasingly important to the College given the growth in undergraduate research; the conservative policy of providing 0.25 TCH per student credit hour, which is far too restrictive for the time-intensive mentoring required of undergraduate research; and the importance of supporting active research programs for faculty interested in remaining current in their disciplines, which is fundamental of excellent teaching in the rapidly evolving disciplines of the life and physical sciences.

The need for modern research and teaching equipment is an ongoing concern for the entire College of Science. Needless to say, E&G funding is far too limited to be able to support the many, expensive pieces of equipment that are required of modern laboratory programs in the life and physical sciences. However, significant progress has been made in this area in the past couple of years, and it continues to be a point of major focus for the Department of Geosciences and the College collectively. Equipment that has been, or is about to be, purchased since last year for use by the Department of Geosciences includes an X-Ray diffractometer, an environmental scanning electron microscope with an energy dispersive X-Ray spectrometer, and a 3-D computer visualization system, among other items. The total College of Science costs for these important instruments total approximately \$280,000, and will be shared with other

departments in the College, including Chemistry and Physics. In addition, a 132-node supercomputer cluster is also available for the entire College of Science, valued at roughly \$250,000.

The program review team also suggested that the Department of Geosciences should establish an advisory council. At the present time, there are no specific plans to create departmental-level advisory committees, but the Dean, together with his Development Director, is planning on creating an advisory board for the College of Science. It is likely that this will be established during the upcoming year.

v. *Program Review: Mathematics*

Reviewers

- Peter Alfeld, PhD, Department of Mathematics, University of Utah
- Robert Heal, PhD, Department of Mathematics and Statistics, Utah State University
- Sue Harley, PhD, Department of Botany, Weber State University
- Eric Swedin, PhD, Department of Information Systems and Technologies, Weber State University

Program Description: The main purpose of the department is to provide students with the tools necessary to competently integrate mathematics into their personal and professional lives. Quality teaching of relevant courses is the Department's central objective. Because mathematics is a rapidly developing field and the best teachers are those who remain active in their discipline, faculty engage in such activities as mathematical and educational research, in-service teacher training, and course and curriculum development. Professional and scholarly work is both expected and encouraged.

Students taking mathematics have various goals that include intellectual enrichment, employment in industry, teaching, and graduate work. The curriculum meets or exceeds their needs in each area, both in terms of content and of teaching styles. Since mathematics is central to many fields, the course offerings are designed in a manner sensitive to the needs of other disciplines.

Faculty & Staff

Mathematics	Tenure	Contract	Adjunct
Number of faculty with Doctoral degrees	12		
Number of faculty with Master's degrees		2	
Number of faculty with Bachelor's degrees			
Other Faculty			
Total	12	2	
Developmental Mathematics	Tenure	Contract	Adjunct
Number of faculty with Doctoral degrees	1		
Number of faculty with Master's degrees		8	
Number of faculty with Bachelor's degrees			
Other Faculty			
Total	1	8	

Students

Ay	# of Majors	Student FTE	# of Faculty	FTE-To-Faculty Ratio	# of Grads	# of Grads Placed
04	80	1309	28	46	10	10
05	70	1320	32	41	13	13
06	73	1320	33	37	16	16
07	68	154	32	35	11	11
08	85	145	31	36	12	12

Finances

Mathematics	2003-04	2004-05	2005-06	2006-07	2007-08
Total E&G Revenue	1,324,954	1,355,511	1,456,713	1,561,951	1,465,177
Total Grant Revenue	35,383	0	0	0	0
Total Revenue	1,360,337	1,355,511	1,456,713	1,561,951	1,465,177
Instructional Expenses	1,169,408	1,261,832	1,328,924	1,429,641	1,372,310
Support Expenses	155,546	93,679	127,789	132,310	92,867
Other Expenses	0	0	0	0	0
Total E&G Expense	558,528	1,355,511	1,456,713	1,561,951	1,465,177
Total Grant Expense	35,383	0	0	0	0
Net Revenue-Expense	0	0	0	0	0

Program Assessment

Strengths of the Mathematics Program Identified by the Review Team

- Providing upper-division math specialist courses to obtain the Elementary Education Mathematics Endorsement is unique in the state and the effort is well recognized by school administrators.
- There is a significant amount of scholarly activity among the current faculty, a noteworthy accomplishment given the 12-hour teaching loads.
- Essentially all classes at the calculus-level and above are taught by PhD-level faculty, a worthy goal for any institution of higher education.
- Splitting off the Developmental Math Program seems to be a good idea, and considered as such by most department members.
- Faculty expressed strong support of the department head and his leadership.
- The WSU mathematics faculty is a healthy mix of experienced and young faculty, all competent.
- The Department has established an overall rigorous, well-constructed curriculum.
- There is strong faculty commitment and financial support by the College of Science and WSU administration for research and scholarly activity.

Challenges for the Mathematics Department Identified by Review Team

- The department has low numbers of majors.
- There is little time available to support faculty scholarly activity.
- The space in Building 4 poses many challenges for the department. The building itself is old, in need of repair, and highly unattractive when compared to the numerous modern, appealing structures at WSU.
- The low pay of Developmental Mathematics teachers should be improved.
- The Department's web site is out of date and does not match the level of design and quality of other departments in the College of Science.
- The operating budget needs to be increased.

Institutional Response to the Review Team Report

The review team points out that the limited number of majors in the program is a concern, which has been an issue for many years. It is also an appropriate suggestion that more emphasis be placed on recruiting, especially in the area of mathematics teaching. In order to address the issue in Mathematics, coupled with the desire to increase enrollments in all programs in the College, the College has a very active publicity and recruitment committee with representation from every department. The College's general advisor supports the publicity and recruitment activities of the committee. The committee has recently revised recruitment materials that are provided to the recruitment office and it has assisted in updating departmental and

college web pages, including those in Mathematics and Developmental Mathematics, which are now completed and active. In addition, a monthly College of Science E-Newsletter is published out of the Dean's office, which features one department or program in each issue, along with special announcements.

It is of paramount importance that WSU graduates develop a significantly deeper understanding of and appreciation for science and mathematics, and that the number of students majoring in the sciences and mathematics increase. Of course this is not simply a WSU issue, but it reflects national trends. As documented in countless state and national reports, the low level of understanding and expertise in STEM fields (Science, Technology, Engineering, and Mathematics) is at a crisis level for the U.S. in terms of maintaining a competitive advantage in the world economically, technologically, and scientifically.

The review team mentioned "there is a significant amount of scholarly activity among the current faculty, a noteworthy accomplishment given the 12-hour teaching loads!" However, the review team also pointed out that perhaps adjustments could be made by "differentiating those loads...to support scholarly activity...." The College of Science Chairs' Council has been discussing the research to teaching ratio and plans to revisit it during fall 2008. The issue is becoming increasingly important to the College given the growth in undergraduate research; the conservative policy of providing 0.25 TCH per student credit hour, which is far too restrictive for the time-intensive mentoring required of undergraduate research; and the importance of supporting active research programs for faculty interested in remaining current in their disciplines, which is fundamental of excellent teaching especially in rapidly developing disciplines. The Dean anticipates that a formal policy regarding reassign time for research and scholarship activities will emerge this fall.

Space constraints are also a serious and ongoing issue in the College of Science, negatively impacting all departments. The Science Laboratory building is now nearly 40 years old (completed in 1969) and the adjacent Lind Lecture Hall is only one year younger. The design and current status of the Science Lab building is highly restrictive to collaborative projects and suffers from significant fire, earthquake, and asbestos issues. Furthermore, Buildings 3 and 4 (the Department of Mathematics and the Developmental Mathematics Program are currently housed in Building 4) are the oldest buildings on campus and are now 50 years old. It is a high priority of the Dean to address building constraint issues for the entire College, including the Department of Mathematics and the Developmental Mathematics Program. The Dean concurs that it is in the best interest of the faculty and their programs if the Mathematics and Developmental Mathematics faculty and staff can be housed together with the rest of the faculty and staff in the College.

The relatively low salaries of the Developmental Mathematics program faculty (specifically the lecturers) and the need to increase operating budgets stem from limited available funding, particularly E&G funding. The general issues of salaries and operating budgets are continually focused on, and ongoing attempts are made to address them in positive ways. Although E&G funding is limited, some one-time funding has been made available to address such issues as remodeling and new furnishings in Building 4 classrooms, but the ability to significantly increase salaries continues to be a struggle. Fortunately this is a serious concern of central administration, and some positive strides have been made in that area over the past few years.

The Dean appreciates the thoughtful self-study developed by the Department of Mathematics, the numerous informed comments made by the program review team, and the reflective response by the Department. Many of the concerns and recommendations suggested are already being addressed. The recommendations will also certainly be very helpful in strategically planning for the next five years.

vi. Program Review: Department of Microbiology

Reviewers

- Jeff Broadbent, PhD, Associate VP for Research, Professor of Nutrition and Food Sciences, USU
- Bonnie Baxter, PhD, Associate Professor of Biology, Westminster College
- Gene Sessions, PhD, Chair, Department of History, Weber State University
- Yaz Simonian, PhD, Chair, Department of Clinical Laboratory Sciences, Weber State University
- Ed Walker, PhD, Professor of Chemistry, Director of Chemical Technology Center, WSU

Program Description: The Department of Microbiology seeks to provide a quality undergraduate education to students of Weber State University in both general education and discipline-specific courses. The Department strives to provide graduates with a solid academic foundation for further educational opportunities, and the knowledge and skills for career opportunities upon graduation. The Department seeks to integrate into the student's program of study the development of skills including critical thinking, problem solving, written and oral communication, and laboratory research techniques. The Department provides opportunities for research and other scholarly activities for both faculty and students, and serves as a resource for the campus and the state of Utah in the area of microbiology. The Department attempts to inspire lifelong learning and teach students the broad range of disciplines in microbiology. Also, the Department works by the principle that a more knowledgeable public will be able to make more informed decisions with regard to scientific issues that impact their lives.

Faculty & Staff

Microbiology	Tenure	Contract	Adjunct
Number of faculty with Doctoral degrees	7		
Number of faculty with Master's degrees			
Number of faculty with Bachelor's degrees			
Other Faculty			
Total	7		

Students

Ay	# of Majors	Student FTE	# of Faculty	FTE-To-Faculty Ratio	# of Grads	# of Grads Placed
04	178	248	10	24	41	41
05	165	230	11	20	32	32
06	223	233	12	19	36	36
07	159	211	11	19	31	31
08	182	200	11	18	44	44

Finances

Microbiology	2003-04	2004-05	2005-06	2006-07	2007-08
Total E&G Revenue	573,377	654,287	687,007	748,758	761,059
Total Grant Revenue	120,620	0	0	0	0
Total Revenue	693,997	654,287	687,007	748,758	761,059
Instructional Expenses	453,909	526,251	565,607	591,342	619,570
Support Expenses	119,468	128,036	121,400	157,416	141,489
Other Expenses	0	0	0	0	0
Total E&G Expense	573,377	654,287	687,007	748,758	761,059
Total Grant Expense	120,620	0	0	0	0
Net Revenue-Expense	0	0	0	0	0

Program Assessment

Strengths of the Microbiology Program Identified by the Review Team

The Microbiology Department continues to attain an exceptionally high standard of quality in undergraduate education. The faculty are an outstanding group who work very hard to address the needs of their students and the Department. Their efforts are rewarded by a reputation for student commitment and post-graduate opportunities that continue to drive high student enrollment in the degree program. The achievements of the Microbiology Department are especially noteworthy in light of the fact that institutional support for its core activities has often been inadequate.

Challenges for the Microbiology Department Identified by Review Team

- The review team is concerned that current reliance by the Microbiology Department on adjunct faculty, donated lab supplies, and external funds for teaching and faculty development has made it vulnerable to a "Perfect Storm," wherein these resources could disappear with little warning and cripple the remarkable efforts of this faculty and program. It is strongly encouraged that WSU administrators take immediate action to better safeguard the security and vitality of this valuable department.
- As was recommended by the last review team, there is a strong and immediate need for reallocation within the College of Science to address chronic shortfalls in faculty numbers, faculty support, and in the space, equipment, and supplies needs for teaching and research. The microbiology annual supply budget is simply not adequate to support this kind of laboratory-based science due to the consumables required and equipment.
- Give faculty load credit for laboratory contact hours and undergraduate research time. This faculty-student interaction time is rich in value for the College and the institution. There is a national surge in recognizing lab time as contact time, and WSU should be moving in this direction. At present, one-third of college/university campuses give 1:1 contact hours for lab, and another third give 0.75:1 for lab (CUR 2002 study). Undergraduate research load time models are also available. Valuing faculty time results in prolific work and increased student outcomes.
- Reinstate the frozen faculty position and add one position. The committee is cognizant that the decrease in Gen Ed enrollment in the Department of Microbiology has resulted in the "freezing" of a faculty position and understands the rationale behind this action. However, the review team firmly believes that the Department has introduced sound measures to grow enrollment, and it must be provided with additional resources (including at least two new on-campus faculty lines) to ensure these measures will succeed and for the department to continue to realize its own high standards.

Institutional Response to the Review Team Report

The review team correctly points out that the number of majors has generally been rising in recent years. In fact, going back roughly 11 years, the number of majors has increased by about 50 percent during that period. On the other hand, the number of student credit hours rose slightly over that same period, peaking in 2003-04, but has been declining fairly steadily since then. Similar patterns in SCH production are being seen in other departments in the College of Science as well, due largely to a decrease in enrollments in general education offerings.

In order to help encourage increases in the numbers of majors in all programs as well as to address the declining SCH issue, the College has a very active publicity and recruitment committee with representation

from every department in the College. The College's general advisor also supports the publicity and recruitment activities of the committee. The committee has recently revised recruitment materials that are provided to the recruitment office and assisted in updating departmental and college web pages. In addition, a monthly College of Science E-Newsletter is published out of the Dean's office which features one department or program in each issue, along with special announcements.

The College of Science Chairs' Council also began a conversation this past spring about developing new and inviting general education offerings that meet the recently revised and adopted Life Science and Physical Science general education goals and criteria. This conversation will continue into this fall and will integrate with the campus-wide conversation regarding general education assessment.

The concern that the review team raised regarding the need for increased financial support is also certainly appropriate. This is an issue across all departments in the College. It is an especially difficult problem for those departments with significant costs in expendable supplies, such as chemicals and reagent kits. The review team also specifically noted funds available for travel and training as being an issue. While it is certainly true that allocated funding for these needs are "woeful", the departments in the College are given the flexibility to use departmental funds, as deemed most appropriate, for travel, by reallocating funds within subaccounts as necessary. In addition, WSU provides opportunities to obtain internal grant funding to also support travel in many cases. The entire issue of ongoing funding in all areas for departments is a continual challenge for the College and one that the College continues to examine carefully.

The need for the acquisition of laboratory equipment is also a significant and ongoing concern for the entire College. Needless to say, E&G funding is far too limited to be able to support the many, expensive pieces of equipment that are required of modern laboratory programs in the life and physical sciences. However, significant progress has been made in this area in the past couple of years, and it continues to be a point of major focus for the College collectively. Instruments that have been, or are about to be, purchased since last year that are specifically dedicated to the Department of Microbiology include a spectrometer that can read 96 well plates simultaneously, and a phase-contrast microscope with a digital camera (the combined cost of the two instruments is approximately \$48,000). In addition, other significant pieces of equipment that are being obtained by the College that may have occasional application for the Department of Microbiology include a 90 MHz FT-NMR, a gas chromatograph/mass spectrometer, and an environmental scanning electron microscope with an energy dispersive X-Ray spectrometer. The total costs for these important instruments total more than \$400,000.

While major grant writing is strongly encouraged within the College of Science, such activity requires a significant commitment on the part of the departmental faculty, combined with appropriate support from the College and the University. With a growing focus on obtaining external funding, WSU has just completed a search for a new director of the Office of the Sponsored Projects. It is anticipated that the hiring of the new director will enhance the support provided to grant writers in the College and across the campus. The College of Science Chairs Council has also discussed the possibility of hiring an individual that will support Principle Investigators with grant writing and post-award support. This decision is pending, based on the future direction and support of the Office of Sponsored Projects.

The Chairs' Council has determined that it is important to support a College information technology specialist. Although this individual will have significant responsibility for support of the geographic information systems laboratory in Geosciences and the 132-node supercomputer in Physics, the individual will also be available to support IT needs across all of the College departments. A committee has been

organized to conduct the search that reflects the requirements of the position, with the expectation that a person will be hired during spring 2009, pending the legislature's decisions on budget cuts.

As the review team also pointed out, severe space limitations exist in the Department of Microbiology. This is also true throughout the College of Science, and is negatively impacting all departments. The Science Laboratory building is now nearly 40 years old (completed in 1969) and the adjacent Lind Lecture Hall is only one year younger. The design and current status of the Science Lab building is highly restrictive to collaborative projects and suffers from significant fire, earthquake, and asbestos issues. However, more immediately, there is no available space in the building for expansion of programs, or for necessary support of research by faculty and students. Efforts are continually underway to identify temporary and long-term solutions to the challenging space constraints that the College of Science currently operates under.

Finally, the review team also pointed out the need to "give faculty load credit for laboratory contact hours and undergraduate research time." The College of Science Chairs' Council has been discussing the issue of necessary time for research and scholarship particularly as it applies to undergraduate research, and plans to revisit the issue in a more focused way during fall 2008. The issue is becoming increasingly important to the entire college given the rapid growth in undergraduate research; the very conservative policy of providing 0.25 TCH per student credit hour, which is far too restrictive for the time-intensive mentoring required of undergraduate research; and the importance of supporting active research programs for faculty interested in remaining current in their disciplines, which is a fundamental requirement of excellent teaching, especially in rapidly developing disciplines. The Dean anticipates that a formal policy regarding reassign time for research and scholarship activities will emerge from this fall's discussion.

vii. Program Review: Department of Physics

Reviewers

- Mark Riffe, PhD, Department of Physics, Utah State University
- Paula Szkody, PhD, Astronomy Department, University of Washington
- Dan Bedford, PhD, Department of Geography, Weber State University
- H. Laine Berghout, PhD, Department of Chemistry, Weber State University

Program Description: The mission of the Department of Physics at Weber State University is to provide high-quality instruction in physics at the undergraduate level. This includes providing courses in the general education area of physical science, pre-professional and pre-engineering courses in physics, and courses and programs for those who want to major or minor in physics.

Further activities of the department include providing opportunities for research and other student credit scholarly activities of both faculty and students, advising the students served by the department, and serving as a resource for the campus and the state of Utah in the areas of physics and astronomy.

Faculty & Staff

	Tenure	Contract	Adjunct
Number of faculty with Doctoral degrees	13		1
Number of faculty with Master's degrees			1
Number of faculty with Bachelor's degrees			
Other Faculty			
Total	13		2

Students

Ay	# of Majors	Student FTE	# of Faculty	FTE-To-Faculty Ratio	# of Grads	# of Grads Placed
04	63	237	12	19	3	3
05	74	234	13	18	7	7
06	63	220	14	16	10	10
07	61	202	13	15	7	7
08	70	198	13	15	11	11

Although Physics has comparatively few graduates compared to the large number of students in other disciplines who take courses in Physics to fulfill general education requirements or to acquire background and skills in the discipline, WSU's Physics graduates are prepared to enter industry, teach in the Public School System, or to pursue graduate study.

Finances

Physics	2003-04	2004-05	2005-06	2006-07	2007-08
Total E&G Revenue	916,558	916,170	1,076,126	1,119,451	1,124,288
Total Grant Revenue	85,760	170,767	46,106	632,084	365,992
Total Revenue	1,002,318	1,086,937	1,122,232	1,751,535	1,490,280
Instructional Expenses	766,393	754,903	900,715	917,783	969,235
Support Expenses	142,684	152,842	145,112	197,241	151,630
Other Expenses	7,481	8,425	30,299	4,427	3,423
Total E&G Expense	916,558	916,170	1,076,126	1,119,451	1,124,288
Total Grant Expense	85,760	170,767	46,106	632,084	365,992
Net Revenue-Expense	0	0	0	0	0

Program Assessment

Strengths of the Department of Physics Identified by the Review Team

- The interviews made clear that the major strength of the department is the excellent faculty, who are dedicated to providing the best physics education possible for undergraduates. This dedication is encouraged by the support of the faculty for each other and by the department in general. Every single member, from the secretary and lab manager to the Chair, mentioned the quality of their fellow workers and their working environment. The students praised the availability of the faculty and their real concern for students. It is obvious that the Mission Statement of the department to focus on the education of undergraduates (including general education students, students in service courses and Physics majors) is the actual practice of the department members.
- The Physics curriculum is a second major strength. While most of the teaching and student credit hours are spent in service courses, strong preparation for the future is provided for Physics majors as well. Physics students feel well prepared for graduate school and industry through both Physics and the Applied Physics majors. The curriculum includes all of the standard core Physics courses as well as some that students at other undergraduate institutions frequently do not have the possibility to take. For example, Computational Physics courses are new additions to the curriculum that give students state-of-the-art preparation for real-world problems in a modern computer lab.
- A third major strength is the emphasis the department places on undergraduate research. This involvement of students (both inside and outside of the Physics Department) allows them to experience science in a way that encourages problem solving and creativity far beyond what textbook and lecture

alone can accomplish. This helps students gain access to graduate school and to industry, and also serves as a source of inspiration for the faculty. For example, the new high altitude balloon initiative, which has been under development for the past year, involves many students from Physics and other departments at WSU and other Utah universities.

- The Department is very active in community outreach with ongoing efforts associated with the Ott Planetarium and museum. The recent physics open house attracted 600 people to see the planetarium and physics demonstrations and higher numbers are anticipated for the second open house.
- The Department has a comprehensive program of assessment that goes beyond that of most Physics departments.

Challenges of the Department of Physics Identified by the Review Team

- The Physics department is a leader in transforming undergraduate education at WSU by strongly emphasizing undergraduate research, but this emphasis creates a challenge for faculty members who must balance their research (which encourages student participation), with the significant teaching loads required at WSU. For faculty members who are involved in research, the 12 teaching credit hours per semester is, in effect, an overload that cannot be sustained without burnout or loss of faculty to other institutions. The load is a challenge both for seasoned faculty members as well as newer faculty members who do not feel adequately prepared for the large workloads. This was the most frequently noted issue in the interviews.
- Significant problems also exist with respect to the administration of external grants at WSU, which must be addressed. The committee feels that undergraduate research benefits all majors and should be a required part of both the Physics and Applied Physics programs.
- The loss of a valuable young faculty member coupled with the anticipated growth from upcoming engineering and computer science gaming courses presents another challenge.
- Continuing the present curriculum and providing for significant increases in student numbers will require increased faculty and laboratory space, both for research faculty and for laboratory-based course work. Some of the students reported dissatisfaction with labs in the entry-level courses, with four students per lab station and labs mixing students from 2000 and 2200 series courses. Several faculty mentioned the need for a new experimental lab faculty member, but this will require additional faculty laboratory space. Both students and faculty mentioned the need for a new course in Mathematical Physics, as the currently required courses from the math department alone do not fully prepare students to apply their mathematical training to physics applications.
- A related challenge involves the Department's computer lab facilities. Students in Computational Physics courses, as well as those involved in research projects, use the computer lab extensively. This facility requires technical support beyond what can be supplied by regular faculty members in order to remain a useful resource. The current contribution of faculty member time to support the computer lab is a significant burden.

Review Team's Major Recommendations

- Reduce the teaching credit hour requirements for faculty that are involved in significant undergraduate research projects. Justification for this change might be found through a survey of teaching loads at comparable four-year universities. With research becoming expected of undergrads, and with larger Physics courses and labs, more time is required for mentoring, grading, etc. The department Chair should be encouraged to provide as much comp time as possible.
- Ensure that the Office of Sponsored Programs provides better service for grant support. A knowledgeable person at the college level to help with all science grants is urgently needed.
- Provide a full time technical person at the college level to provide support for the computer labs in all science departments. This individual must be able to deal with the customized hardware and software configurations that are common in the College of Science, which will require creation of a permanent position with that responsibility. Faculty do not have time to constantly deal with security and maintenance issues such as managing user accounts and updating computer hardware and software.
- Provide sufficient student lab space so there are not more than 2 students per lab station and there are separate labs for calculus based physics courses and trigonometry based physics courses.
- Add a Mathematical Physics course for majors.

Institutional Response

In addition to the challenges identified above, it would also be appropriate for the Department to focus on the negative enrollment trends in general education courses that have plagued it in recent years even though the numbers of students in service courses have increased somewhat and majors graduating from the program have remained relatively flat and stable.

Regarding the review team's concern over faculty workload as it applies to research, the College of Science Chairs' Council has already begun such a discussion, particularly as it applies to undergraduate research, and plans to revisit the issue in a more focused way during Fall Semester 2008. The issue is becoming increasingly important to the entire college given the rapid growth in undergraduate research; the very conservative policy of providing 0.25 TCH per student credit hour, which is far too restrictive for the time-intensive mentoring required of undergraduate research; and the importance of supporting active research programs for faculty interested in remaining current in their disciplines, which is a fundamental requirement of excellent teaching, especially in rapidly developing disciplines. The Dean anticipates that a formal policy regarding reassign time for research and scholarship activities will emerge from discussion.

Over the past several years there has been a significant increase in the amount of writing for external grants that has been occurring within the Department of Physics and in other departments in the College. While major grant writing is strongly encouraged within the College, such activity does require a significant commitment on the part of the departmental faculty, combined with appropriate support from the College and the University. With a growing focus on obtaining external funding, the University has just completed a search for a new director of the Office of the Sponsored Projects. It is anticipated that the hiring of the new director will enhance the support provided to grant writers in the College of Science and across the campus. The College of Science Chairs' Council has also discussed the possibility of hiring an individual into a new position as an Associate Dean or an Assistant to the Dean that will support Principle

Investigators with grant writing and post-award support. However, this decision is pending, based on the future direction and support of the Office of Sponsored Projects.

The review team also commented on the need to establish a formal policy regarding the capture of indirect (formally F&A, or facilities and administration) College of Science costs that provide support at the departmental and PI level. At the present time, the F&A capture that comes to the College of Science has been used collectively to support equipment purchases and remodeling needs. However, an "experiment" is underway with one faculty member in the Physics Department such that 15 percent of the F&A that the member's grant writing generates is redistributed back to the department and 10 percent to the PI, with 25 percent remaining at the Dean's level and 50 percent being held centrally. Given the very low negotiated F&A rate that currently exists at WSU of 34.8 percent of salaries and benefits only, the amount filtering down to the Department and the PI is likely to be very small. It is critical that WSU move toward a higher negotiated F&A rate that also includes equipment. Not only will this result in additional needed revenue generated by grants that can then more fully support the administrative costs associated with the activity, but it will also help to support facilities remodeling and ongoing maintenance that are required for expensive and delicate scientific instrumentation. However, given the significant concerns expressed by some faculty regarding the redistribution of F&A, the College of Science Chairs' Council is planning on developing a policy based on the current negotiated rate that will represent the consensus of the College on the issue. A draft of this policy should be ready for discussion in fall 2008.

As the review team also pointed out, severe space limitations are also developing in the Department of Physics. This is also true throughout the College of Science, and is negatively impacting all departments. The Science Laboratory building is now nearly 40 years old (completed in 1969) and the adjacent Lind Lecture Hall is only one year younger. The design and current status of the Science Lab building is highly restrictive to collaborative projects and suffers from significant fire, earthquake, and asbestos issues. However, more immediately, there is no available space in the building for expansion of programs, or for necessary support of research by faculty and students. Efforts are continually underway to identify temporary and long-term solutions to the challenging space constraints.

Concerning the review team's recommendation regarding support for the Department's computational facilities, the Chairs' Council has already determined that it is important to support a College of Science information technology specialist. Although this individual will have significant responsibility for support of the geographic information systems laboratory in Geosciences and the 132-node supercomputing cluster and associated computational classroom in Physics, the individual will also be available to support IT needs across all of the departments in the College. A committee has been organized to conduct the search that reflects the interdisciplinary requirements of the position, with the expectation that a person will be hired during spring 2009, pending the outcome of the Legislative Session.

Finally, in order to help encourage increases in the numbers of majors in all programs as well as address the declining student credit hour issue, the College of Science has a very active publicity and recruitment committee with representation from every department in the College. The College's general advisor also supports the publicity and recruitment activities of the committee. The committee has recently revised recruitment materials that are provided to the recruitment office and assisted in updating departmental and college web pages. In addition, a monthly College of Science E-Newsletter is published out of the Dean's office that features one department or program in each issue, along with special announcements.

The College of Science Chairs' Council also began a conversation this past spring about developing new and inviting general education offerings that meet the recently revised and adopted Life Science and Physical Science general education goals and criteria. This conversation will continue into this fall and will integrate with the campus-wide conversation regarding general education assessment

viii. Program Review: Department of Zoology

Reviewers

- Kate Grandison, PhD, Previous Chair, Biology Department, Southern Utah University
- Rebecca Pyles, PhD, Dept. of Biological Sciences, The Honors College Dean, E. Tennessee State U.
- Sara Ewert, PhD, History Department, Weber State University
- John Sohl, PhD, Physics Department, Weber State University

Program Description: The Department of Zoology is committed to training undergraduate students for diverse careers as biologists as well as for entry into graduate and professional schools. The Department seeks to provide a sound academic foundation for the study of Zoology by engaging students in creative scholarship and critical thinking. Broad faculty expertise is reflected in courses that explore animal biology at the molecular, cellular, organismal, and ecological levels. Integrated into the curriculum at all levels are exercises that help students develop additional skills fundamental to success in all fields of biology, regardless of specialization. Particular emphasis is placed on computer proficiency, laboratory and field experiences, written and oral communication, and understanding scientific literature. Research activities in the department are student-centered, providing an additional dimension to zoology education at WSU. Students are encouraged to work closely with faculty on research projects, to complete an undergraduate thesis, and to publish and present their findings at scientific meetings. The Department recognizes its special responsibility as the center of pre-professional training at WSU; and its faculty offer courses and serve as advisors for students from all departments who are interested in careers in medically related professions. The department also offers a variety of general education courses to provide all interested WSU students with an appreciation of and respect for life on Earth.

Faculty & Staff

Zoology	Tenure	Contract	Adjunct
Number of faculty with Doctoral degrees	7		
Number of faculty with Master's degrees			
Number of faculty with Bachelor's degrees			
Other Faculty			
Total	7		

Students

Ay	# of Majors	Student FTE	# of Faculty	FTE-To-Faculty Ratio	# of Grads	# of Grads Placed
04	305	341	14	25	56	56
05	249	370	13	28	41	41
06	390	341	12	28	31	31
07	347	337	14	25	29	29
08	315	325	16	20	37	37

Finances

Zoology	2003-04	2004-05	2005-06	2006-07	2007-08
Total E&G Revenue	933,809	968,347	896,311	1,071,865	1,111,895
Total Grant Revenue	36,706	109,224	145,095	161,545	173,050
Total Revenue	1,030,515	1,077,571	1,041,406	1,233,410	1,284,945
Instructional Expenses	790,605	750,562	652,466	816,310	930,162
Support Expenses	143,204	217,785	243,845	255,555	181,733
Other Expenses	0	0	0	0	0
Total E&G Expense	933,809	968,347	896,311	1,071,865	1,111,895
Total Grant Expense	36,706	109,224	145,095	161,545	173,050
Net Revenue-Expense	0	0	0	0	0

Program Assessment

Strengths of the Zoology Program Identified by the Review Team

- The credentials, productivity and teaching quality of the faculty.
- The climate of collegiality.
- Excellent leadership of the Chair.
- Research productivity and support of undergraduate research experiences.
- Effective use of resources provided and overall resourcefulness.

Challenges for the Zoology Department Identified by Review Team

- Need to review and revise the Mission Statement and Learning Outcomes, including integration of learning outcomes at the course level.
- Need to provide assistance for faculty to diversify pedagogies and assessment tools used in courses.
- Need for more targeted mentoring and earlier peer evaluation of teaching for new faculty.
- Need to revise materials to reflect greater recognition of the department's role in advising needs for students with goals in zoology jobs or graduate schools.
- Need to review the tenure document in the College of Science.
- Need to support the Human Anatomy course sequence provided by Zoology.
- Need for formal recognition of teaching research students as part of faculty teaching workload.
- Need for adequate space for teaching and research.
- Need for adequate start-up funds for new faculty in the sciences.
- Need for revision of current distribution of indirect costs to provide incentives at the department level.
- Need to establish a Standing Advisory Committee for the Premedical Program.
- Provide funding to utilize standardized senior exit examinations in the area of major to support external program reviews.

Institutional Response to the Review Team Report

The Dean will raise the issue with the Chairs' Council to determine if there is any perceived need to revisit the tenure document, which was most recently revised in 2003.

The current facility for the Human Anatomy laboratory is certainly inadequate, although it was improved substantially two years ago during the remodel of Lind Lecture Hall. Unfortunately, an alternative location is currently unavailable given the severe space constraints that exist in the College of Science. The Dean certainly agrees with the review committee that creating a second, competing human anatomy laboratory in another college doesn't seem to be justifiable given the significant expense involved. Duplicating efforts is not an appropriate way to spend limited institutional resources.

The College of Science Chairs' Council has already begun a discussion regarding faculty teaching workload as it applies to undergraduate research, and plans to revisit the issue in a more focused way during fall 2008. The issue is becoming increasingly important to the entire college given the rapid growth in undergraduate research; the very conservative policy of providing 0.25 TCH per student credit hour, which is far too restrictive for the time-intensive mentoring required of undergraduate research; and the importance of supporting active research programs for faculty interested in remaining current in their disciplines, which is a fundamental requirement of excellent teaching, especially in rapidly developing disciplines. The Dean anticipates that a formal policy regarding reassign time for research and scholarship activities will emerge from this fall's discussion.

Some progress has been made to provide adequate start-up funds for new faculty since the program review team completed their report. The Provost has been able to allocate \$30,000 in annual ongoing funding to the College of Science in support of new faculty start-up packages (the funding must be distributed across all new life and physical science faculty in any given year). Although a significant improvement to previous funding for which the College is deeply appreciative, it is still far less than is typically provided at comparable institutions with active research programs. The Dean will attempt to supplement the pool of funds whenever possible through open position salary savings.

At the present time, the F&A capture (facilities and administration, or "indirects") that comes to the College of Science has been used collectively to support equipment purchases and remodeling needs. However, an "experiment" is underway with one faculty member in the Physics Department such that 15 percent of the F&A that the member's grant writing generates is redistributed back to the department and 10 percent to the PI, with 25 percent remaining at the Dean's level and 50 percent being held centrally. Given the very low negotiated F&A rate that currently exists at WSU of 34.8 percent of salaries and benefits only, the amount filtering down to the department and the PI is likely to be very small. For a \$60,000 base salary and a grant that supports a 10 and 11th month summer salary, the 15 percent returned to the department would amount to approximately \$849 and the 10 percent to the PI would be \$566.

It is critical that WSU move toward a higher negotiated F&A rate that also includes equipment costs. Not only will this result in additional needed revenue generated by grants that can then more fully support the administrative costs associated with the activity, but it will also help to support facilities remodeling and ongoing maintenance that are required for expensive and delicate scientific instrumentation. However, given the significant concerns expressed by some faculty regarding the redistribution of F&A costs, the College of Science Chairs' Council is planning on developing a policy based on the current negotiated rate that will represent the consensus of the College on the issue. A draft of this policy should be ready for discussion in fall 2008.

As the review team has pointed out, severe space limitations exist in the Department (note also the recommendation and response above concerning the Human Anatomy laboratory). Unfortunately this is true throughout the College, and is negatively impacting all departments. Some reallocations within the College are planned that will ultimately free up another small research space in the Chemistry Department. In addition, remodeling will be required to house the Chemistry Department's new FT-NMR when it arrives later this summer or fall. This is being accomplished by having the current shop spaces move into an underground facility attached to the Science Lab building that previously held the campus chiller plant.

As mentioned in the Zoology Department's response, the issue to establish a standing committee for the premedical program has been discussed with the current director of the Dr. Ezekiel R. Dumke Family Pre-Medical Professional program. She believes that the current structure is serving the students well. Given the success in placement of students into medical programs, her assessment seems justified.

Funds should be identified for use of a standardized Senior Exit Examination in the area of major, to be given at least once every three to five years, to coincide with year before external program review for each department. This is an interesting suggestion that will be explored in the future. It is clearly important that all of the programs gather meaningful assessment data that allow WSU to analyze the success of programs and make appropriate changes informed by those data.

The College and/or University should investigate the potential of providing short-term graduate certificate programs in Conservation and/or Wildlife Biology designed to address educational need of local employers and the regional community. This is a very worthwhile suggestion and certainly one worth considering. Perhaps similar consideration may be given to other program areas within the College as well. It is critical that the College maintain relevant curricular offerings, degrees, and certificates, especially within the context of market demand for specific programs.

C. Dixie State College of Utah

i. New Business Administration Emphasis: Finance

Request: Dixie State College (DSC) requests a new emphasis in Finance for the Business Administration baccalaureate degree. This emphasis is comprised of 18 credits already part of the Finance curriculum.

Need: An emphasis in Finance within a Business/Accounting degree is traditionally one of the most sought-after areas of study in most business schools; it provides students with the training they need to qualify for high-paying careers in banking and finance. This particular area of study has topped all other requests for degree options by a significant margin among past and present DSC students.

All of the courses required for the emphasis in Finance have been part of the electives in the Business Administration degree for several years. There are approximately twenty students who are currently taking these courses as part of their Business Administration degree because they desire Finance to be their area of expertise, whether it is a formal emphasis on their transcript or not.

The ability for DSC to list Finance as an emphasis available in the Business Administration degree will allow the College to serve the needs of its students for additional training options as well as provide potential employers with a much more accurate description of a student's training and abilities.

Institutional Impact: The most significant impact will likely be the validation of current practices and the increase in educational options for DSC students. The addition of an emphasis in Finance will not affect current enrollments within the Udvar-Hazy School of Business or in other related departments. Those who desire these courses are already enrolled in them as part of their elective options within the Business Administration degree. It may, however increase enrollment in the future as those students who want to major in Finance find the emphasis available at DSC.

There will be no immediate impact on faculty physical facilities, budget, or equipment as these courses are currently part of the curriculum.

Finances: There are not additional costs required to implement this emphasis and it will not negatively affect other programs on campus. Adequate resources in qualified faculty, advisors and library resources are already in place and sufficient classrooms space and technology are available.

ii. *Program Review: Emergency Medical Services Program*

Reviewers: The program is nationally accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Committee on Accreditation of Educational Programs for the EMS Professions (CoAEMSP). It was accredited in November 2005 and is scheduled for reaccreditation in 2010. Usually, external consultants and reviewers have been those associated with the specialized accreditation process. Program reviews have been evaluated by DSC faculty. External reviews of specific courses take place regularly. The external reviewer is Cindy Huish, Utah Department of Health, EMS Bureau.

Program Description: The Dixie State College Emergency Medical Services (EMS) program offers certificates in the following areas:

- Paramedic Program-AAS degree, DSC course completion certificate, eligibility for State Of Utah certification, eligibility for National Registry Certification.
- EMT-Intermediate Program- DSC course completion certificate, eligibility for State Of Utah certification, eligibility for National Registry Certification.
- EMT-Basic Program- DSC course completion certificate, eligibility for State Of Utah certification, eligibility for National Registry Certification.

The EMS Program underwent an institutional program review in 2002; however, the summary of that review, which the College submitted, was never recorded. This is a replacement summary. The EMS Program is currently in its next institutional program review process.

Faculty, Staff, Students, and Finances

Five-Year Enrollment and Budget Data	00-01	01-02	02-03	03-04	04-05
Number of students in program for review period, EMT + Paramedic	145	133	120	126	116
Enrollment/Attrition		-.092%	-.09%	+1%	-.092%
Number of graduates, EMT Certificates*	84	11	79	91	32
Number of graduates, Paramedic Certificates	10	14	0**	24	12
Instructional Costs per FTE	4,490.32	3,960.46	2,246.85	1,710.20	3,667.38
Instructional Costs per SCH	149.68	83.63	74.93	56.99	121.86

*EMT certificates were not tracked until 2001.

**Paramedic certificates for 2003 were not reported until 2004.

Program Assessment

Program Strengths and Commendations:

- The EMS program has developed into a strong program and does a fine job of meeting the emergency medical training needs of the community.
- The program is now designated as the American Heart Association Training Center for all of southern Utah and in 2002, the year of this program review, coordinated training for over 2,000 individuals.
- Students pass with high EMT and paramedic examination scores and nearly all graduates are placed.

Recommendations: No significant concerns were cited by the evaluation team. They ranked the EMS Program as “commendable”; that is to say, certain components of the program were commended for excellence. The program is considered to be strong or above average when compared against similar programs in peer institutions, and consistently ranks among the top third of programs at this institution.

Institutional Response: A major goal for the program relates to the limited time for clinical rotations and travel for students for some field and clinical sites. At all of the clinical rotations the program is in competition for clinical time with three or more other nursing, paramedic, or physician’s assistant programs. Students are also required to travel anywhere from 50 to 300 miles for clinical rotations depending on the clinical site location. The goal is to continually expand clinical and field opportunities within a reasonable distance of program facilities and to continue to seek out these educational opportunities. Because of the commendable ranking of the EMS program, progress report was not required prior to the next regular program review cycle.

iii. Program Review: Graphics Communications Department

Reviewers: The Graphics Program was accredited by the Graphic Arts Education and Research Foundation/Printing Industries of America (GAERF) in April 2005; it is scheduled for reaccreditation in 2010. External consultants are: Garth Barnum, self-employed GCOM Artist; Steve Gleason, Precision Litho; Joe Brazzeal, West Press Printing Company; Dave Gardner, Snow Canyon High School.

Program Description: The Graphics Communications department at Dixie State College is certified by PrintED; it has a competency-based curriculum developed by the Printing Industries of America (PIA) and educators. These are job entry competencies and they can transfer to other certified institutions of higher learning. Students can earn certificates in six areas that are recognized by industry across the U.S.:

- Digital File Preparation
- Digital File Output
- Beginning Offset Press
- Advanced Offset Press
- Finishing and Bindery
- Comprehensive GCOM

The Graphic Communications program review was conducted in 2002 and a summary of the program was submitted to the Commissioner’s office at that time; however, receipt was apparently never recorded. This summary report is provided to replace the original.

Faculty, Staff, Students, and Finances

Five-Year Enrollment and Budget Data	00-01	01-02	02-03	03-04	04-05
Number of students in program for review period	177	184	175	185	166
Enrollment/Attrition		+3.95%	-5.1%	+5.7%	-9%
Number of graduates	14	26	4	1	2
Instructional Costs per FTE	6,295.79	6,248.91	7,029.54	8,798.96	6,735.85
Instructional Costs per SCH	209.86	208.87	234.32	293.30	296.66

Program Assessment

Program Strengths and Commendations:

- This program has gone to great effort to develop curriculum and clearly delineate its mission and goals in order to be an accredited program.
- The program is to be commended for its efforts in becoming more integrated with the visual technology program.

Recommendations:

- The program lacked a fully developed assessment plan and did not maximize use of existing data to analyze its effectiveness. Fully analyze existing job-placement data and use them to create a plan for improving student learning.
- More specific plans for improving student achievement need to be developed.

Institutional Response: The Graphics Program has only one full-time faculty member, and given the prospect of that faculty member's imminent retirement, the program at DSC is under review. One direction under consideration is a plan to fold the Graphic Communication program into the Visual Technology program to maximize faculty resources. This and other scenarios for the Program's future are being considered at this time.

Recommendation

The Commissioner recommends the Regents review the items on the Program's Information Calendar. No action is required.

William A. Sederburg
Commissioner of Higher Education

WAS/AMH

January 7, 2009

MEMORANDUM

TO: State Board of Regents
FROM: William A. Sederburg
SUBJECT: University of Utah - Universe Project Vendor Approval

Issue

The University of Utah seeks Regent approval to move forward with Inland American Communities Group, Inc. as the selected developer for the Universe Project. University of Utah officials presented conceptual information about the Universe Project at previous Board of Regents meetings, including at the presentation of the Campus Master Plan.

Background

This project consists of a proposal to lease approximately 7.9 acres of University ground adjacent to Rice Eccles Stadium to a private developer who would construct a Transit Oriented Development project that supports the mission of the University. In return, the Inland American Communities Group, Inc. will construct office/classroom space and a parking structure for the University. University officials will be present at the meeting to provide additional information.

Commissioner's Recommendation

The Commissioner recommends that the Regents review the request and, following discussion, approve the request from the University of Utah to move forward with the selected developer.

William A. Sederburg
Commissioner of Higher Education

WAS/GLS/MDV
Attachment



Arnold B. Combe
Vice President for Administrative Services

January 6, 2009

Dr. Greg Stauffer
Board of Regents, The Gateway
60 S 400 West
Salt Lake City, Utah 84101-1284

Re: Universe Project

Dear Dr. Stauffer:

The University of Utah requests that the following be added to the Board of Regents agenda for the meeting scheduled on January 16, 2009.

The University requests Regent approval to accept the proposal from and move forward with Inland American Communities Group, Inc. as the selected developer. A letter of intent between the University and Inland American will be presented to the University's Board of Trustees for approval at its meeting on January 13, 2009.

Once formal Option and Lease(s) agreements for this transaction are finalized, they will be presented to the Board of Regents for its formal approval.

As background, this project consists of a proposal to lease approximately 7.9 acres of University ground adjacent to Rice Eccles Stadium to a private developer who would construct a Transit Oriented Development project that supports the mission of the University. In return, in addition to creating an exciting and vibrant experience for the campus and community, the developer will construct office/classroom space and a parking structure for the University.

Sincerely,

Arnold B. Combe
Vice President

c: Michael K. Young, President
Michael G. Perez, Associate Vice President
Troy Caserta, Accounting Officer

January 7, 2009

MEMORANDUM

TO: State Board of Regents
FROM: William A. Sederburg
SUBJECT: Salt Lake Community College – Campus Master Plan

Salt Lake Community College seeks approval of its Master Plan during the January 2009 State Board of Regents meeting. A detailed presentation will be made at the Board meeting. College officials will be present and will respond to questions from the Board.

Commissioner's Recommendation

The Commissioner recommends that the Board approve Salt Lake Community College's Campus Master Plan.

William A. Sederburg
Commissioner of Higher Education

WAS/GLS/MDV

January 16, 2009

MEMORANDUM

To: State Board of Regents

From: William A. Sederburg

Subject: Utah State University – Approval to Seek Legislative Bond Authority

Utah State University requests approval to seek legislative bonding authority during the upcoming Legislative Session. The University proposes to issue additional research revenue bonds totaling \$3.8 million plus costs of issuance, debt services reserve requirements, etc. The proceeds from these bonds, along with other funds received, will be for the construction of the Bingham Entrepreneurship and Energy Research Center in Vernal, Utah, which was already approved by the Legislature in 2008. University officials will be available at the January 16 meeting to answer any questions from the Board.

Commissioner's Recommendation

The Commissioner recommends approval for USU to seek legislative bonding authority during the upcoming Legislative Session.

William A. Sederburg
Commissioner of Higher Education

WAS/GLS/MDV
Attachment

Utah State UNIVERSITY

OFFICE OF THE VICE PRESIDENT
FOR FINANCE AND BUSINESS
1445 Old Main Hill
Logan, UT 84322-1445
(435) 797-1146
FAX: (435) 797-0710

5 January 2009

Commissioner William A. Sederburg
Utah State Board of Regents
Board of Regents Building The Gateway
60 South 400 West
Salt Lake City UT 84101-1284

Dear Commissioner Sederburg:

Utah State University requests approval to seek legislative bonding authority during the upcoming legislative session. This item is expected to be approved by the USU Board of Trustees on January 9, 2009.

The University proposes to issue additional research revenue bonds totaling \$3,800,000 plus costs of issuance, debt service reserve requirements, etc. The proceeds of these bonds will be combined with other funds that have been received for the construction of the Bingham Entrepreneurship and Energy Research Center in Vernal, Utah, which was approved by the legislature in the 2008 legislative session.

The Center is intended to focus energy research and teaching initiatives that are important to the Uintah Basin as well as the State, and capitalize on the opportunities that currently exist within the local community. The building will be located just south of the new UCAT/UBATC building that is currently under construction.

Although reimbursed overhead revenues will be used to secure the bonds, the actual debt service payments will be made from donations from the Uintah Impact Mitigation Special Service District which the university will receive over the life of the bond which is expected to be 15 years or less.

Upon receiving bonding authority from the Legislature, USU will proceed through the traditional steps of issuing bonds which will require, among other things that the USU Board of Trustees and Board of Regents approve the financing terms and conditions before the bonds will be issued.

We appreciate your support in this endeavor and ask that you present this item for Regents approval.

Sincerely,



Fred R. Hunsaker
Interim Vice President for
Business and Finance

c: Stan Albrecht, President
Greg Stauffer, Associate Commissioner for Finance and Facilities

January 7, 2009

MEMORANDUM

TO: State Board of Regents
FROM: William A. Sederburg
SUBJECT: USHE - Update on Institutional Audit Reports to the Regents' Audit Committee

Issue

Regent Policy R-565 requires the Regents to meet as needed to review audits and financial information. As part of this responsibility, the Regent Audit Committee is charged with scheduling meetings as necessary to maintain regular, independent communication and information flow between the Regent Audit Committee and trustee audit committees. These meetings are now being scheduled.

The Committee is planning to meet January 27, 2009 with institutional trustee audit chairs, trustee chairs, and in some cases campus auditors. Two institutions are scheduled to report on different dates. The U of U is tentatively scheduled to report January 13 in the afternoon (schedules pending). USU will report in March or April.

Commissioner's Recommendation

This is an Informational item only; no action is needed.

William A. Sederburg
Commissioner of Higher Education

WAS/GLS/DAM
Attachment

January 7, 2009

MEMORANDUM

TO: State Board of Regents
FROM: William A. Sederburg
SUBJECT: USHE – Report of Auxiliary Funds

Background

The Board of Regents requests an annual update of auxiliary operations within the Utah System of Higher Education (USHE).

Issue

Auxiliary enterprises are business activities, or other support activities (as distinguished from primary programs of instruction, research, and public service, and from organized activities and intercollegiate athletics). According to SBR Policy R550, the primary purpose is to provide specified services to students, faculty, staff, or guests of the institution. All housing, food service, and college store activities in any institution are to be classified and managed as auxiliary enterprises. Other activities which serve primarily individuals (as distinguished from internal departments of the institution) and operate on an essentially self-supporting basis may also be classified and managed as auxiliary enterprises.

Annually USHE institutions provide reports of auxiliary enterprise activity. This information has been consolidated by OCHE staff for the purpose of Regent review (see attachment). Auxiliary operations are examined by independent auditors during the annual financial statement audits.

No anomalies were apparent in reviewing the reports supplied by the institutions. There are a few outlier percentages in comparing net income to the ending fund balances, but nothing of a material nature. Should there be questions regarding these figures, representatives of the institutions should be available to supply explanations

Commissioner's Recommendation

Information Only.

WAS/GLS/TC
Attachment

William A. Sederburg
Commissioner of Higher Education

UTAH SYSTEM OF HIGHER EDUCATION

Report of Auxiliary Enterprise Operations (2007-08 Actuals)

	<u>UU</u>	<u>USU*</u>	<u>WSU</u>	<u>SUU**</u>	<u>SNOW**</u>	<u>DSC</u>	<u>CEU***</u>	<u>UVU</u>	<u>SLCC</u>
Beg Fund Balance****	\$ 215,000	\$ 851,219	\$ 2,814,287	\$ 2,202,077	\$ 698,192	\$ 2,044,806	\$ 93,353	\$ 3,434,396	\$ 2,251,327
Revenues	71,493,000	33,281,524	14,816,727	9,741,921	1,963,122	5,369,283	2,686,472	15,604,670	13,198,993
Expenditures	<u>(69,551,000)</u>	<u>(29,890,549)</u>	<u>(13,476,475)</u>	<u>(7,543,110)</u>	<u>(1,929,036)</u>	<u>(5,215,385)</u>	<u>(2,712,590)</u>	<u>(15,157,981)</u>	<u>(12,761,092)</u>
Net Income	1,942,000	3,390,975	1,340,252	2,198,811	34,086	153,898	(26,118)	446,689	437,901
Transfers	<u>(1,843,000)</u>	<u>(3,615,704)</u>	<u>(948,511)</u>	<u>(2,122,593)</u>	-	<u>(954,165)</u>	-	<u>(446,689)</u>	<u>(274,569)</u>
Change in F/B	<u>99,000</u>	<u>(224,729)</u>	<u>391,741</u>	<u>76,218</u>	<u>34,086</u>	<u>(800,267)</u>	<u>(26,118)</u>	-	<u>163,332</u>
End Fund Balance	<u><u>\$ 314,000</u></u>	<u><u>\$ 626,490</u></u>	<u><u>\$ 3,206,028</u></u>	<u><u>\$ 2,278,295</u></u>	<u><u>\$ 732,278</u></u>	<u><u>\$ 1,244,539</u></u>	<u><u>\$ 67,235</u></u>	<u><u>\$ 3,434,396</u></u>	<u><u>\$ 2,414,659</u></u>
End Fund Bal to Rev	0.44%	1.88%	21.64%	23.39%	37.30%	23.18%	2.50%	22.01%	18.29%
End Fund Bal to Exp	0.45%	2.10%	23.79%	30.20%	37.96%	23.86%	2.48%	22.66%	18.92%
End Fund Bal to Net Inc	16.17%	18.48%	239.21%	103.61%	2148.32%	808.68%	-257.43%	768.86%	551.42%

* USU's beginning Fund Balance is adjusted from 06-07 reported end balance to exclude totals from Uintah Basin campus bookstore.

** SUU & SNOW's beginning balances do not match 06-07's reported ending balances due to adjustments made after completing annual audits. It should be noted that these institutions do not receive the results of their audits until after the reporting date required by policy.

*** In last year's auxiliary report CEU was showing a negative ending fund balance; these numbers were recalculated to more accurately convey CEU's auxiliary activity as reflected in the numbers above.

**** It should be noted that the Fund Balance includes cash, inventories, etc. related to running/maintaining Auxiliary Enterprise Operations.

UTAH SYSTEM OF HIGHER EDUCATION

Report of Auxiliary Enterprise Operations (2008-09 Budgets)

	<u>UU</u>	<u>USU</u>	<u>WSU</u>	<u>SUU</u>	<u>SNOW</u>	<u>DSC</u>	<u>CEU</u>	<u>UVU</u>	<u>SLCC</u>
Beg Fund Balance*	\$ 314,000	\$ 626,490	\$ 3,206,028	\$ 2,278,295	\$ 732,278	\$ 1,244,539	\$ 67,235	\$ 3,434,396	\$ 2,414,659
Revenues	73,228,000	34,412,665	14,043,156	8,088,784	1,435,000	5,428,000	2,616,680	15,676,002	13,164,100
Expenditures	<u>(71,223,000)</u>	<u>(30,245,448)</u>	<u>(13,051,156)</u>	<u>(5,979,364)</u>	<u>(1,280,000)</u>	<u>(4,957,700)</u>	<u>(2,616,680)</u>	<u>(15,235,081)</u>	<u>(12,949,100)</u>
Net Income	2,005,000	4,167,217	992,000	2,109,420	155,000	470,300	-	440,921	215,000
Transfers	<u>(1,945,000)</u>	<u>(4,167,217)</u>	<u>(830,000)</u>	<u>(2,037,508)</u>	<u>-</u>	<u>(90,100)</u>	<u>-</u>	<u>(440,921)</u>	<u>(215,000)</u>
Change in F/B	<u>60,000</u>	<u>-</u>	<u>162,000</u>	<u>71,912</u>	<u>155,000</u>	<u>380,200</u>	<u>-</u>	<u>-</u>	<u>-</u>
End Fund Balance	<u><u>\$ 374,000</u></u>	<u><u>\$ 626,490</u></u>	<u><u>\$ 3,368,028</u></u>	<u><u>\$ 2,350,207</u></u>	<u><u>\$ 887,278</u></u>	<u><u>\$ 1,624,739</u></u>	<u><u>\$ 67,235</u></u>	<u><u>\$ 3,434,396</u></u>	<u><u>\$ 2,414,659</u></u>
End Fund Bal to Rev	0.51%	1.82%	23.98%	29.06%	61.83%	29.93%	2.57%	21.91%	18.34%
End Fund Bal to Exp	0.53%	2.07%	25.81%	39.31%	69.32%	32.77%	2.57%	22.54%	18.65%
End Fund Bal to Net Inc	18.65%	15.03%	339.52%	111.41%	572.44%	345.47%	0.00%	778.91%	1123.10%

* It should be noted that the Fund Balance includes cash, inventories, etc. related to running/maintaining Auxiliary Enterprise Operations.

January 9, 2009

MEMORANDUM

TO: State Board of Regents

FROM: William A. Sederburg

SUBJECT: USHE – Annual Report of Institutional & System Bonded Indebtedness

Background

Utah Code 53B-21 provides the Regents with the authority to issue negotiable revenue bonds for the purpose of “acquisition, purchase, construction, improvement, remodeling, adding to, extending, furnishing or equipping of more than one building” (Section 101). Bonds are secured by institutional income and revenues, including (but not limited to) student fees, land grant interest, and profits from proprietary activities. Bonds may be issued in multiple series with multiple call dates, at the discretion of the Regents. Section 110 of the chapter allows the Regents to issue refunding bonds, although the Regents generally use the more flexible parameters of the Utah Refunding Act (UCA 27-11). While revenue bonds require legislative approval, refunding bonds may be issued at the discretion of the Board of Regents.

Current federal regulations permit a tax-exempt bond to be refunded one time (advanced refunding) unless the refunding issue is within 90 days of the call date on the refunded bonds (current refunding). Tax-exempt bonds may be refunded with taxable bonds. Bonds (with callable and non-callable maturities) may also be defeased at any time through a total cash defeasance escrow, although this is a rare occurrence.

College and university bonds are not counted as an official “debt of the state” (53B-21-102), but some bond covenants carry a “moral obligation” pledge stating that the Board of Regents will, in the case of potential default, formally request financial assistance from the Governor and Legislature. Heretofore the Regents haven’t needed to exercise such a clause.

Commissioner’s Recommendation

This is an information item only; no action is needed.

WAS/GLS/NGM
Attachment

William A. Sederburg
Commissioner of Higher Education

Utah System of Higher Education

Outstanding Revenue Bonds

Fiscal Year 2008

College or University (Contact Person)	Original Amount	Series	Purpose	Required Debt Service Coverage*	2008 Debt Service Coverage	Maturity Date	Outstanding Balance as of June 30, 2008
U of U (Todd Kapos)	\$ 11,140,000	1987A	Aux & Campus Fac Sys Ref Rev		1.82	2014	\$ 1,050,000
	52,590,000	1997A	Aux & Campus Fac Sys Rev (variable)		1.82	2016	10,000,000
	25,020,000	1998A	Hospital Rev		7.26	2013	3,232,594
	120,240,000	1998A	Aux & Campus Fac Sys Ref Rev		1.82	2029	53,687,274
	5,975,000	1999A	Aux & Campus Fac Sys Rev		1.82	2014	2,982,234
	17,585,000	2000A	Research Facilities Rev and Ref		10.61	2010	0
	2,755,000	2001	Aux & Campus Fac Sys Rev		1.82	2021	2,092,173
	9,685,000	2004A	Research Facilities Rev		10.61	2019	7,565,902
	5,515,000	2005A	Research Facilities Rev (Moran Eye Center)		10.61	2025	5,060,896
	20,130,000	2005B	Research Facilities Rev Ref		10.61	2020	16,742,019
	30,480,000	2005A	Hospital Rev Ref		7.26	2018	32,326,434
	42,955,000	2005A	Aux & Campus Fac Sys Ref Rev		1.82	2020	42,961,100
	77,145,000	2006A	Hospital Rev Ref		7.26	2031	82,125,098
	20,240,000	2006B	Hospital Revenue Bonds (variable)		7.26	2031	20,240,000
10,000,000	2007	Research Facilities Rev		10.61	2022	9,420,000	
<u>\$ 451,455,000</u>						<u>\$ 289,485,724</u>	
USU (Rick Allen)	\$ 15,010,000	1999A	Student Fee & Housing Sys Ref Rev	1.1	1.33	2014	\$ 10,925,000
	23,735,000	2002A	Research and Ref Rev	1.2	8.19	2017	19,135,000
	705,000	2003A	Research Revenue Bonds	1.2	8.19	2015	471,000
	11,065,000	2004A	Student Building Fee Ref Rev	1.1	1.33	2026	9,925,000
	39,155,000	2007	Student Fee & Housing Sys Rev Ref	1.1	1.33	2035	39,155,000
<u>\$ 89,670,000</u>						<u>\$ 79,611,000</u>	
WSU (Ron Smith)	\$ 5,050,000	1998A	Student Facilities Sys Ref Ref	1.25	2.4	2010	\$ 1,795,000
	12,280,000	2001A	Student Facilities Sys Rev	1.25	2.4	2012	1,125,000
	22,810,000	2005	Student Facilities Sys Rev	1.25	2.4	2032	22,810,000
	10,155,000	2007	Student Facilities Sys Rev Ref	1.25	2.4	2031	10,125,000
<u>\$ 50,295,000</u>						<u>\$ 35,855,000</u>	

College or University (Contact Person)	Original Amount	Series	Purpose	Required Debt Service Coverage*	2008 Debt Service Coverage	Maturity Date	Outstanding Balance as of June 30, 2008
SUU (Mitch Bealer)	\$ 4,540,000	2002A	Student Building Fee/Refunding Rev	1.15	1.91	2014	\$ 3,320,000
	10,060,000	2003	Student Building Fee/Refunding Rev	1.15	1.91	2023	8,685,000
	975,000	2005	Pav/Sta Fac Exp Student Bldg Fee Rev Ref	1.15	1.91	2014	666,268
	<u>\$ 15,575,000</u>						<u>\$ 12,671,268</u>
Snow	none						<u>\$ 0</u>
DSC	none						<u>\$ 0</u>
CEU	none						<u>\$ 0</u>
UVU (Wendy Hope)	\$ 11,020,000	2004A	Student Ctr Build Fee/Unified Sys Rev Ref	1.1	1.21	2020	\$ 7,850,000
	4,035,000	2004B	Student Ctr Build Fee/Unified Sys Rev Ref	1.1	1.21	2011	1,600,000
	3,900,000	2004A	MBA Utah County/Lease Rev	1.1	1.21	2019	3,345,000
	2,600,000	2004B	MBA Utah County/Lease Rev Taxable	1.1	1.21	2014	1,750,000
<u>\$ 21,555,000</u>						<u>\$ 14,545,000</u>	
SLCC (Mark Hamilton)	\$ 6,600,000	1998	Aux Sys & Student Fee Rev Ref	1.25	2.38	2012	\$ 3,610,000
	5,890,000	2001	Aux Sys & Student Fee Rev Ref	1.25	2.38	2016	5,540,000
	<u>\$ 12,490,000</u>						<u>\$ 9,150,000</u>
UCAT	none						<u>\$ 0</u>
USHE Totals	<u>\$ 641,040,000</u>						<u>\$ 441,317,992</u>

Institution representatives (see Contact Person) reviewed and approved their balances prior to publication

*The U of U wasn't able to supply this number for this printing, but assured the regents that they are within compliance on all revenue bonds.

January 7, 2009

MEMORANDUM

TO: State Board of Regents

FROM: William A. Sederburg

SUBJECT: USHE - Information technology (IT) services update and funding cuts

Issue

The Office of the Commissioner of Higher Education has provided IT services to the colleges and universities for many years. Savings in software and substantial efficiencies in IT operations have been realized in the work of the combined college and university CIOs led by USHE CIO Stephen Hess. Legislative IT funding requests developed by this group, supported by the Commissioner's Office, have been very successful; however, these funds are now being cut. The amount of these cuts and their effect on college and university IT services will be substantial.

Background

Information Technology is critical to the operational and strategic success of higher education. It is one of the few strategic elements that when effectively used can improve the accessibility, accountability and affordability of higher education. It is changing the very way universities and colleges teach, communicate, collaborate, and how students learn. University business processes are moving on line, saving money and people's time. Valuable data gathered is being compiled into reports measuring success and better informing key decisions. Students and faculty are provided with unprecedented global access to research, knowledge and information resources. Trips to campus are minimized and the capacity of building infrastructure extended. Students take care of university and college business online and not in line. Instruction is productively and effectively built by teams of academics, customized, measured for effectiveness and delivered free of time and place in multiple formats. The quality of the overall education experience is greatly improved with the combination of proven technology and academic best practice.

OCHE readily sees the strategic advantage of harnessing technology to improve higher education. OCHE has developed a system strategic plan and is developing an efficient IT infrastructure to support and align with the pressing needs of higher education. The plan and actions include the following:

1. Network Connectivity

OCHE has planned and acquired robust, secure and reliable internal and external network connectivity to all universities, colleges and applied technology centers across the state, and Internet connectivity to the world. This has been accomplished in partnership with the Utah Education Network. This network connectivity includes connection to the Internet 2 research network with expanded capacities for experimentation, teaching and research. Utah has recently

been chosen as the hub for Internet 2 in the Intermountain area and is providing leadership to improve networking and data center capacity for research for the Intermountain region.

2. Computer Software and Hardware Purchases

OCHE centrally purchases central software programs and applications for the colleges and universities at a savings of \$1,008,500 per year. These software programs operate the academic and administrative services on all campuses. These contracts include applications such as finance, human resources, and student services from Oracle and Sungard; course management systems from Blackboard Vista; desk top and laptop, browser, spreadsheet, presentation, word processing and email from Microsoft and Novell; legacy system support from Multinet, and antivirus software from McAfee.

OCHE, with system CIOs, speaks with one voice to vendors to resolve trouble or other issues that may arise.

3. System Wide IT Committees

OCHE has organized IT support committees to assess common IT staff and infrastructure needs and in turn provide training and support. The goal of these committees is to insure all universities and colleges have a fully functioning IT service and trained IT staff and IT users. The committees focus on following key areas:

- a. Administrative Computing Committee
 - i. Improve student, finance, human relations, alumni, and research services
- b. Network & Systems Infrastructure and Unified Communication
 - i. Provide a seamless coordinated communication and collaboration system combining e-mail, instant messaging, texting, social networks, blogs, wikis, wire line and cell phones, pagers, PDAs, laptops and desktop computers
- c. IT Security, Disaster Recovery and Business Continuity Committee
 - i. Provide training and plans so all universities and colleges have secure IT environments and off-site disaster recovery for reliable business continuity
- d. Legislative Funding Initiatives
 - i. Propose legislative funding initiatives that will leverage system cooperation and industry best practice to provide core system IT services to all universities and colleges at less cost. Use standard programs to better share information and make it easy for students to transfer from one state institution to another.

4. Security Audits

OCHE has organized IT audit teams to audit each campus for compliance to Regents' IT Security Policy, state and federal laws and regulations and industry best practice. The results of these audits are reported to the Regents Audit Committee, campus CIOs and presidents.

5. Develop Regents' IT Policy

OCHE develops IT policy for the Utah System of Higher Education in the areas of security, privacy, disaster recovery, commercial speech, peer-to-peer downloading, web advertizing, acceptable use, e-mail retention and other policy issues yet to be determined.

6. Provides Sungard Banner Support for Dixie, CEU and Snow
OCHE developed and oversees the contract service for Sungard support now provided by Weber State University for Dixie, CEU and Snow. Weber State provides database, system administration and disaster recovery support to these colleges with the goal that they will have a fully functioning Sungard Banner service for their students, faculty and staff. The success of this support is evaluated through service level agreements.
7. Internal IT Support for the Office of the Commissioner
OCHE provides IT support for the internal IT operations for UHEAA, UESP and the Commissioner's staff. An internal committee called the Information Technology Council develops plans, policy, training and coordination for all general IT systems and services.
8. Advise the Presidents and Regents on the strategic impact of IT on higher education
OCHE provides briefings to the presidents and Regents on the strategic impact of IT on higher education and suggests possible ways it could be used to improve business, academic and research processes at the campuses.
9. Represent higher education on the Utah State and other IT Advisory Committees
OCHE represents higher education on all State of Utah IT and other IT advisory committees such as the Utah Education Network and legislative IT committees.
10. Review campus IT departments
OCHE assists in the development of campus IT plans and consulting in any area of IT where it is requested by a university or college.
11. Legislative Requests
OCHE has supported IT legislative funding requests which have been successful in funding software and infrastructure for college and university central IT systems. This funding has been labeled as the Higher Education Technology Funding Initiative or HETI.

Budget Cuts

The HETI funds have been cut 4% already this year and likely will be cut another 7% this fiscal year and another 8 % for fiscal year 2010 for a projected total base cut of 19%. (See the attached spreadsheet.) This is a substantial cut and will impact the overall quality, quantity and security of college and university IT services.

The cut in HETI money means we will no longer have sufficient funding to pay for software maintenance cost or equipment replacement. Cuts in campus IT budgets will further negatively impact services which have been saving colleges and universities substantial sums of money for many years.

The initial cuts of 4% have been primarily across the board. Additional cuts will eliminate services and people in already bare-bone IT operations and put at risk the security of institutional data.

Commissioner's Recommendation

The Commissioner recommends that CIOs do all they can to preserve core campus-wide services such as:

- Computer networks and infrastructure
- Administrative Applications (Banner, Oracle)
- Telephones
- Wireless
- Data Center
- Email
- University Web Sites
- Service Desk/Operators
- Directory
- Security

The Commissioner also recommends that the CIOs continue to work together to bring efficiencies to the System's technology services. Areas that should be investigated are network operation centers, data centers, e-mail, data warehouses, disaster recovery, security and administrative applications.

Since information technology is one of the few tools educators can invest in to bring about substantial efficiencies, savings, access to information and improved quality in higher education. The Commissioner recommends that IT funding remain a high priority as budget decisions are being made.

This is an informational item only; no action is required.

William A. Sederburg
Commissioner of Higher Education

WAS/GLS/SHH
Attachment

HIGHER EDUCATION TECHNOLOGY INITIATIVE

FISCAL YEAR 2009

ENTITY	4 % BASE CUT
CEU	\$ 7,328
DSC	\$ 10,014
SBR	\$ 2,800
SLCC	\$ 27,537
Snow	\$ 8,582
SUU	\$ 13,235
UofU	\$ 61,018
USU	\$ 33,627
UVU	\$ 32,030
WSU	\$ 29,749
TOTALS	\$ 225,922

January 5, 2009

MEMORANDUM

TO: State Board of Regents
FROM: William A. Sederburg
SUBJECT: UHEAA – Information Update

Issue

The Utah Higher Education Assistance Authority (UHEAA) Board of Directors (the Board) met on December 11, 2008 under the direction of UHEAA Board Vice-Chair, Fred Hunsaker. The Board reviewed several action and information items including a detailed report concerning the continuing turmoil in the credit markets and the challenges of financing student loans. UHEAA Executive Director, David Feitz, reported the following:

- UHEAA's student loan volume is up sharply over last year because of increases in enrollment and Federal rule changes which increased borrowing limits by \$2,000 annually. Through December 2008, the dollar amount of student loans is up 23% over last year at \$343 million, while the number of loans is up 19% to 76,100.
- UHEAA has met the demand for student loans with no delays for students.
- While many traditional lending partners are no longer participating in the student loan program, UHEAA has become a loan originator and is meeting the growing demand for student loans with a combination of its own available capital and funds provided by the remaining participating lenders.
- UHEAA is approved to participate in the U.S. Secretary of Education's student loan liquidity plan, which permits selling this year's loans to the Secretary because they cannot be economically financed. Unfortunately, loans which are placed with the Secretary will not be serviced at UHEAA, negatively impacting both UHEAA and students.
- UHEAA has obtained a letter of credit financing from Wells Fargo for approximately \$192 million to restructure some of the agency's existing debt at an annual estimated savings of \$6 million. While this is an important first step, UHEAA cannot obtain all the necessary refinancing capital it needs and remains saddled with much higher-than-normal interest rate costs. While continuing to pursue all available options to restructure its debt at lower interest rates, UHEAA projects a loss of approximately \$6.8 million for the fiscal year ending June 30, 2009, the first operating loss in UHEAA's 32-year existence.

- Senator Hatch visited UHEAA on December 1, 2008. He toured operations and met with the collegiate financial aid directors, who presented the advantages of UHEAA's program for student borrowers and encouraged the Senator to keep administration of student loans local for Utah borrowers. On behalf of UHEAA, Senator Hatch sent a letter to Secretary Margaret Spellings explaining the advantages of keeping loan servicing with the original local servicer, rather than transferring the servicing to the Department of Education's national loan servicer. A copy of Senator Hatch's letter, along with the PowerPoint orientation for Senator Hatch, is included as an attachment to this report.


The Board also took the following actions:

- Approved the meeting schedule for 2009 with meetings on March 19, June 25, September 10 and December 10.
- Approved revisions to UHEAA's lender of last resort policy (R626) in response to instructions from the U.S. Department of Education to submit updated operating procedures to ensure compliance with federal requirements.
- Approved Money Management Investment Reports for UHEAA and UESP.
- Approved a report of the Audit Committee and congratulated the staff for receiving a clean audit for the second year in a row from the State Auditor's recently-concluded fiscal 2008 audit.
- Approved renewal of UHEAA's contract with Pennsylvania Higher Education for student loan systems through January 1, 2014.

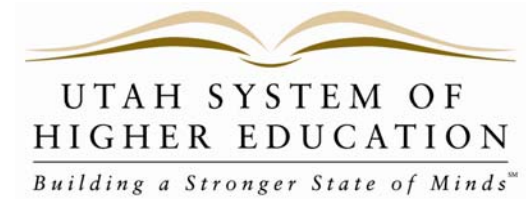
The Board also reviewed several information reports including annual training by Assistant Attorney General Tom Anderson on Utah's Open and Public Meetings Act, a summary of UHEAA's plans to sell student loans to the U.S. Department of Education by implementing the Secretary's liquidity plan, and reports concerning UESP's portfolio, outreach activities, and progress toward a new FDIC-insured investment option. The Board also reviewed the results of a recent request for proposal for an online college outreach platform replacing UtahMentor. The Board noted the decrease in UHEAA's cohort default rate from 4.3% to 2.8% and reviewed UHEAA's rehabilitation program to give borrowers who have defaulted on their loans an opportunity to repair their credit history.

Commissioner's Recommendation

This report is for information only. No action is needed.


William A. Sederburg
Commissioner of Higher Education

WAS/DAF
Attachment



Executive Director's Report

UHEAA Board of Directors

December 11, 2008

David A. Feitz
Executive Director
Board of Regents Building
60 South 400 West
Salt Lake City, UT 84101-1284
801.321.7210
dfeitz@utahsbr.edu

Education Lending Landscape

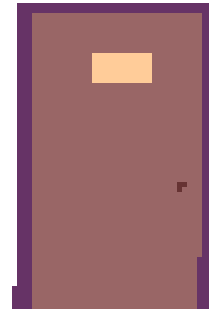
- ▶ UHEAA is fully funding loans with no delays for students
- ▶ Student loan volume **Up 20 Percent** year-to-date
 - Dixie State College Up 63%
 - Salt Lake Community College Up 37%
 - Utah State University Up 14%
 - Weber State University Up 12%
 - Westminster College Up 20%



UHEAA's Commitment As Loan Originator

- UHEAA's historical partners have left the program

- Wells Fargo
- Zions Bank
- Chase Bank
- Key Bank



- UHEAA became an originator of loans to assure access for students

Largest Volume Lenders

Fiscal Year 2009 Year-to-Date Loan Volume



	<u>Market Share</u>
● U.S. Bank	28%
● UHEAA	24%
● America First Credit Union	19%
● Mountain America Credit Union	10%
● Utah Community Credit Union	6%
● University of Utah Credit Union	5%
● Deseret First Credit Union	2%

U.S. Secretary of Education's Liquidity Plan

- UHEAA is approved to participate in the plan
- Provides an outlet for this year's loans which cannot be economically financed
- One-year extension of liquidity plan through June 30, 2010
- UHEAA's plan: Sell this year's and next year's loans to the Secretary
 - *Losing servicing of loans is negative for students and for UHEAA*



Restructuring UHEAA's Existing Debt

- UHEAA remains saddled with much higher than normal interest rate costs
- Continued uncertainty in financial markets
- Wells Fargo Letter of Credit
 - \$195 million
 - Estimated annual savings of approximately \$6 million

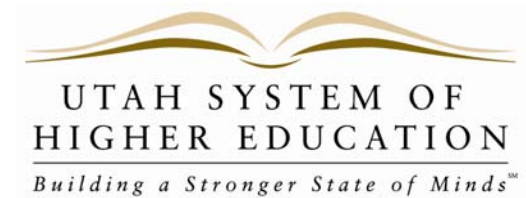


Political Winds Blowing Against Us



“As President, I will eliminate wasteful subsidies for banks under FFEL and mandate that all federal student loans be provided through the direct loan program.”

– Barack Obama
Answer to various 2008
campaign questionnaires



Senator Orrin G. Hatch

Utah Higher Education Assistance Authority

December 1, 2008

David A. Feitz
Executive Director
Board of Regents Building
60 South 400 West
Salt Lake City, UT 84101-1284
801.321.7210
dfeitz@utahsbr.edu

Thank You Senator Hatch!

- Thank you for your support of higher education and UHEAA
- UHEAA is assisting students without interruption during the current financial crisis
- With your support, UHEAA operates one of the leading not-for-profit student loan programs in the nation
- UHEAA's future is at risk – We need your continued help



UHEAA

- **UHEAA: Utah's major financial aid provider**
 - 95,000 students received a total of \$404 million of student loans through UHEAA in fiscal 2008
 - 24,000 students received grant and scholarship aid through 10 state-administered programs in fiscal 2008
- **UHEAA's default rate**
 - 2.8% (national rate is 5.2%)
- **UHEAA's student loan portfolio**
 - 168,000 borrowers
 - \$2.1 billion



Top Six Schools



Gross Loan Volume Fiscal Year 2008

	<u>Amount</u>	<u>Students Helped</u>
➤ University of Utah	\$88 million	16,000
➤ Brigham Young University – Provo	\$47 million	12,000
➤ Utah Valley University	\$39 million	12,000
➤ Utah State University	\$34 million	9,000
➤ Brigham Young University – Idaho	\$27 million	9,000
➤ Weber State University	\$23 million	7,000

Direct Loan Program: Not the Answer for Utah

- Direct Loan supporters are pushing a government monopoly over student loans
- Not the answer for Utah
 - Fewer benefits and higher costs to Utah students
 - Lower quality service for students and schools
 - Less competition and fewer choices for consumers
 - More staff and expense to colleges and universities
 - Higher delinquency and default rates



What's Best for Utah?

- Student loan program administered at the local level – a strong Utah-based, not-for-profit UHEAA
- Nearly 100% of Utah higher education institutions choose UHEAA
- Nationally, only 2 out of 10 colleges choose the Federal Direct Loan Program



Student Loan Funding Today

- Many lenders eliminated or curtailed student lending
- Secretary of Education's Program provides temporary funding through June 30, 2010
- Loans sold to the Department of Education will be serviced by the Department under current plans



Local Student Loan Servicing: Best for Utah Students

- ➔ Utah institutions strongly favor local student loan servicing by UHEAA
- ➔ Local service is best for Utah's students



David A. Feitz
Board of Directors
December 11, 2008

- Eases student loan repayment
- Allows for a single monthly payment to one servicer
- Eliminates borrower confusion with multiple servicers
- Avoids increased potential for delinquency and default
- Reduces cost to borrowers, taxpayers, U.S. Department of Education and servicers

Meeting Current Challenges



“No” on Direct Loans

- Not the Answer for Utah



“Yes” on Local Servicing

- Best for Utah Students and Institutions



Reality Check



*“We’re trading a program
that works for one that’s
politicized.”*

— Senator Hatch
December 1, 2008

Department of Education Audit

- Limited scope
- Establishment of Guarantee Agency Operating Fund in 1997
- Lack of precise guidance from Department of Education
- A decade later: *“You should have done it this way.”*
- Canned findings; all agencies with the same findings
- Auditors at UHEAA beginning December 10





Merry
CHRISTMAS!

ORRIN G. HATCH
UTAH

JACE JOHNSON
CHIEF OF STAFF

104 Hart Senate Office Building

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TDD (202) 224-2849
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Website: <http://www.senate.gov/~hatch>

United States Senate

WASHINGTON, DC 20510-4402

COMMITTEES:

FINANCE

JUDICIARY

HEALTH, EDUCATION,
LABOR AND PENSIONS

INTELLIGENCE

JOINT COMMITTEE
ON TAXATION

October 24, 2008

The Honorable Margaret Spellings
Secretary
Department of Education
401 Maryland Avenue, SW
Washington, DC 20202

Dear Madam Secretary:

Passage of HR 5715 has allowed the nation's leaders the flexibility to provide loan funds to college students for the current academic year. Thank you for your efforts to quickly implement HR 5715 to allow an uninterrupted source of funds for our nation's higher education students as they pursue their academic goals during these difficult economic times.

Initial discussions between the Department of Education and program participants on the implementation of HR 5715 indicate that control of the federal guarantee and servicing of loans, once sold to the Department, will transfer to the Department of Education. Such transfers will split up loans and servicing of such loans for borrowers who have prior loans and then receive new loans financed through the Department's plan in accordance with HR 5715.

However, this bill also provides for you to allow, with agreement of the selling lender, servicing of loans sold to the Secretary to remain with the servicer of the lender selling the loans. The Federal Family Education Loan Program (FFELP) community strongly supports allowing originating lenders and servicers to continue to provide service on all of a borrower's loans. This position is in agreement with the Higher Education Act of 1965 as amended. Section 485(b) states:

To the extent practicable, and with cooperation of the borrower, the guaranty agency shall ensure that a borrower only have one lender, one holder, one guaranty agency, and one servicer with which to maintain contact.

Many program participants offer a one-stop shop experience for borrowers wherein their loans are guaranteed, disbursed, and serviced throughout the life of the loan. This continuous relationship provides stability to the borrower that allows them

October 24, 2008

Page 2


to more effectively honor their financial obligations in a cost neutral manner. History has shown that borrowers with loans that are serviced by multiple servicers experience more difficulty in repaying all loans on a timely basis because of the burden of keeping track of each loan and required payments.

I encourage you to allow the servicing of loans that are transferred to the Department to remain with the original servicer for the following reasons:

- Ease the repayment process for borrowers by allowing a single monthly payment to one servicer
- Eliminate confusion brought on by multiple payments to different servicers/lenders
- Ensure continuity of servicing for borrowers
- Preserve credit ratings of students through more efficient loan servicing
- Avoid the increased potential for default as a result of multiple servicers
- Reduce the costs to the borrower, the taxpayer, the Department of Education, and the servicer

In the best interest of student borrowers, I urge you to support stability in the servicing and guaranteeing of student loans by following the intent and purpose of the Higher Education Act (HEA) and HR 5715. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Orrin Hatch", written over a large, circular scribble.

Orrin G. Hatch
United States Senator

OGH:jaa

January 7, 2009

MEMORANDUM

TO: State Board of Regents
FROM: William A. Sederburg
SUBJECT: Federal Stimulus Package & Infrastructure List

Background

Governor Jon Huntsman, in conversation with the USHE Council of Presidents, has expressed a willingness to consider additional USHE infrastructure projects as part of a list he has submitted for consideration in any Federal Stimulus Package.

Issue

The Governor has submitted a list of state infrastructure projects that might be considered should a pending Federal Stimulus package in fact occur. In order to be included on the list, a facilities project must be what is referred to as "shovel-ready" within 180 days. The institutions have several "ready-to-go" construction projects that can potentially be added to the Governor's initial list. The Commissioner's Office is supporting the institutions in this process, is gathering data from the institutions, and will – by the time of the Regents meeting – have met the necessary deadlines for submission of shovel-ready projects.

Commissioner's Recommendation

This is an Information Only item; it is our intent to bring a list to the Regents meeting of the projects submitted.

William A. Sederburg
Commissioner of Higher Education

State Board of Regents
June 2, 2005
Page 2

WAS/GLS

January 7, 2009

MEMORANDUM

TO: State Board of Regents
FROM: William A. Sederburg
SUBJECT: USHE Legislative Priorities for 2009

At the December 5, 2008 Board of Regents meeting, based on feedback from the Board, we agreed to bring back a revised document to address in more detail the issues related to proposed legislation to make changes to the Utah College of Applied Technology and to take into account the state's worsening economic situation as it relates to the budget request for the Utah System of Higher Education. These are included as Attachments A & B.

In addition to the legislation detailed in Attachment B, the Commissioner's office, presidents and their staffs will be closely monitoring legislation that could impact the Utah System of Higher Education, now and throughout the Legislative Session; and Associate Commissioner Buhler will prepare a weekly report on the status of higher education priorities and other issues of interest.

Recommendation

The Commissioner recommends that the Board consider the statement on the future of the Utah College of Applied Technology, the legislative priorities, make any necessary changes, approve the statement and endorse the priorities for the upcoming legislative session. Further, the Commissioner recommends that the Board authorize the Commissioner, in consultation with the presidents, to monitor, support, or oppose on a case-by-case basis, other legislation that will be introduced during the 2009 Legislative Session. Finally, that the Board be given regular reports during the Legislative Session regarding items of interest to the Utah System of Higher Education.

William A. Sederburg
Commissioner of Higher Education

WAS/DB
Attachments

For Consideration of the State Board of Regents (Attachment A)

Statement on the Future of the Utah College of Applied Technology

January 16, 2009

Background

During the 2001 session of the Utah Legislature, the State Board of Regents strongly supported Governor Michael O. Leavitt's proposal to include the existing Applied Technology Centers as part of the Utah System of Higher Education. This was supported, in part, because more than half of the students being taught by the ATCs were (and are) adults. The Board felt that all public post-secondary education should be part of the Utah System of Higher Education as a way to minimize unnecessary duplication and to best serve students. This proposal was adopted in a special session in 2001 (HB 1003 sponsored by Rep. Ron Bigelow), creating the Utah College of Applied Technology (UCAT) as the tenth institution of higher education. However, while UCAT was placed under the Board of Regents, the Board's governing authority over it was significantly restricted. For example, UCAT was empowered to submit its budget and capital facilities requests directly to the Governor, Building Board, and Legislature, without any oversight or approval from the Board of Regents.

At its core, UCAT is intended to be focused on providing non-credit career and technical training to prepare students for the workforce. However, as part of HB 1003, UCAT was empowered with awarding Associate of Applied Technology (AAT) degrees. Former Commissioner Kendell and others raised concerns that this may be unfair to students since the AAT degrees are non-credit, and no similar degrees exist anywhere else in the nation.

Major amendments were made in 2003, 2005, and 2007, including combining the Central Applied Technology College in Richfield with Snow College, and the Southeast Applied Technology College with the College of Eastern Utah. In December 2007, after an extensive study, the Board of Regents proposed combining the Salt Lake-Tooele Applied Technology College with Salt Lake Community College. After considerable debate and controversy in the 2008 Legislative Session, the Legislature voted to refer this issue to a task force to study the issues of Applied Technology and Higher Education governance. This task force met several times during the 2008 interim, and ultimately approved proposed amendments, Career and Technical Education Amendments, HB 15, to be sponsored by Rep. Ron Bigelow during the 2009 Legislative Session. The Commissioner, USHE Presidents, and Board of Regents all had input into this legislation, as did representatives from UCAT. Some of USHE's recommendations were adopted by the Task Force; others were not. A summary of the proposed bill is attached.

Policy Statement

The Board of Regents continues to believe that all public post-secondary education in the state of Utah should be under the governance and general supervision of the State Board of Regents. This is the best way to ensure maximum cooperation among institutions for the benefit of students and to weed out unnecessary duplication. The Board would prefer that UCAT be put fully under the governance of the Regents, on a par with the other nine higher education institutions. However, we recognize that the Legislature desires UCAT to have a unique status. The proposed bill keeps UCAT as part of the Utah System of Higher Education, but eliminates the Board of Regents' governing authority (limited as it has

been) and grants additional authority to the UCAT Board of Trustees. We are concerned that this could, in the future, result in a competing system of higher education that the taxpayers can ill afford, we respect that this is the Legislature's prerogative as the elected policy-making branch of state government. Furthermore, the Board strongly believes that the UCAT Board of Trustees should be entirely appointed by the Governor and subject to Senate confirmation, as is the case for the Board of Regents and for virtually every other policy board in the state of Utah, to increase public accountability. Despite these concerns, the Board of Regents supports UCAT amendments as long as they include the following provisions:

1. Makes it absolutely clear that UCAT offerings are limited to non-credit CTE programs and that the State Board of Regents has exclusive governance and program approval authority over all for-credit postsecondary education
2. Eliminates UCAT's ability to offer Associate of Applied Technology degrees (or any other type of Associate degree)
3. Prohibits UCAT from seeking to offer degrees or authority to grant college credit
4. Makes it clear that UCAT campuses shall not offer programs in counties other than where they reside which are already served by another higher education institution unless they obtain that institution's specific prior approval
5. Gives Salt Lake Community College full responsibility for postsecondary Career and Technical Education within Salt Lake County, by merging SLTATC with SLCC in Salt Lake County. Funding should be transferred to SLCC, based on a fair and equitable formula that follows the students.

For Consideration of the State Board of Regents (Attachment B)

Utah System of Higher Education 2009 Legislative Priorities January 16, 2009

I- Higher Education Budget

Context

In fulfilling its statutory responsibilities, on September 5, 2008 the State Board of Regents adopted a budget recommendation to the Governor and Legislature for fiscal year 2010, including both operating budgets and capital facilities. Since then, Utah's fiscal condition has worsened, resulting in the Governor calling a Special Session of the Legislature which cut higher education appropriations by four percent for both the current fiscal year and 2010. As tax revenues have continued to decline, both Governor Huntsman and the Executive Appropriations Committee of the Legislature have indicated the need for further cuts.

These budgetary difficulties come at a time when Utah's public colleges and universities are experiencing dramatic enrollment increases. The number of students enrolled on our campuses increased by 8.5 percent in Fall 2008. It appears that enrollment is continuing to increase for the Spring 2009 semester.

The extent to which cuts are made, and how they are administered, can make a critical difference to Utah's public colleges and universities, the students they serve, and the general welfare and economy of the State of Utah.

Principles and Approach

In addressing current and future cuts, USHE institutions will work diligently to follow these core principles:

1. Protect students
2. Protect program quality with emphasis on institutional areas of excellence
3. Meet the economic needs of our state
4. Be constructive participants in helping state policymakers meet fiscal challenges
5. Be transparent in how cuts are made and report them to the Legislature and public

Whenever higher education budgets are cut, it is crucial that the Legislature continue to give presidents the maximum flexibility possible to enable them to follow the principles outlined above.

We strongly believe a reasonable, gradual and humane way to deal with the budget is necessary, such as the approach recommended by Governor Huntsman, in preference to the proposal to reduce budgets now by 7.5% in addition to the 4% already cut (for a total cut of 11.5%) and a total base budget cut of approximately 19% for 2010 (4% cut in September 2008 plus an additional 15%), even with the possibility of restoring some of these cuts later in the Legislative Session. Deep cuts, particularly without time to plan for them, are very difficult for presidents to impose for at least the following reasons:

- Cuts to Utah Higher Education are more difficult than elsewhere since Utah already has the most efficient colleges and universities in the nation in terms of degrees awarded for tax dollars spent (according to the National Center for Higher Education Management Systems).
- Higher education budgets are people/talent intensive. For every 1% reduction, there will be at least 100 full-time jobs lost on our campuses. (Some institutions are estimating a much larger loss of jobs.) A reduction of an additional 15% will eliminate significant intellectual capital in Utah. Once notification is given to employees, it is impossible to rehire them in a manner conducive to long-term relationships.
- Even when discontinuing entire programs, colleges and universities are obligated to “teach out” students so they can complete their intended course of study.
- While we face an immediate and serious revenue shortfall, dramatic deep cuts may do long-term damage to higher education, which is the engine for the state’s future economic success.

Budget Priorities

As the Legislature grapples with a very difficult fiscal environment, we reiterate our priorities along with some practical considerations, given the state’s current situation.

1. Employee compensation remains our highest priority. We advocate treating higher education employees on a par with state and public education employees. Funding of at least health insurance premium increases is a top priority.
2. Just as the national government is looking to enact a stimulus package to boost our economy, we support responsible bonding by the state for higher education and other state facilities. In September the Board of Regents prioritized capital projects totaling \$295 million, to address both aging infrastructure and student enrollment growth.
3. Continued commitment to funding building operations and maintenance (O&M), including those built with private donations that meet the criteria established by the State Building Board and Division of Facilities Construction and Management.
4. The Regents’ Scholarship initiative was launched in 2008 as a way of encouraging high school students to take more rigorous classes and better utilize their senior year. Early results are impressive. This was funded with \$900,000 including \$400,000 in one-time funds. At a minimum, we urge replacement of one-time funds with on-going money.

We recognize the state’s difficult situation. We are committed to working with the Legislature and Governor to improve the state’s economic future. It will be much more difficult for Utah’s economy to recover quickly if we make hasty and potentially unnecessary cuts in our state’s higher education infrastructure.

Given these realities, it is crucial that policymakers take great care in imposing additional cuts to higher education institutions. In this regard, the Board of Regents, Commissioner, and USHE Presidents strongly support the approach proposed by Governor Huntsman to minimize the impact of cuts by phasing them in over time (1.5% additional in 2009, followed by 3.5% additional in 2010, and another 3.5% additional, if needed, in 2011). Further, we strongly support responsible state bonding for critical capital facilities needed to replace or repair aged buildings and to meet student enrollment growth on our campuses.

II- Key Legislation

Regents' Scholarship Technical Amendments (Sen. Hillyard)

- Enhance the sustainability of the program by changing the exemplary award from 75% of tuition to a flat amount such as \$5,000 (and make parallel changes in the New Century Scholarship)
- Eliminate the International Baccalaureate track for eligibility
- Make technical changes

Engineering & Computer Science Initiative Amendments (Sen. Hillyard)

- Change the loan forgiveness program to a financial aid program to better use the limited amount appropriated and reduce administrative overhead costs

Career and Technical Education Amendments (Rep. Bigelow)

- UCAT Legislation prepared by the Legislative Task Force
- Clarifies governance and mission of UCAT
- Consolidates SLTATC into Salt Lake Community College, and leaves Tooele ATC as a stand-alone campus

Concurrent Enrollment Amendments (Sen. Dayton)

- Sen. Dayton's initiative to strengthen and improve the state's Concurrent Enrollment program
- Modifies funding formula to take into account program delivery
- Encourages college readiness and quality through assessment and stricter oversight
- Count and report concurrent enrollment students as scholarship recipients to reflect savings to students

Tax Refund Designation to UESP (Rep. Dougall)

- Rep. Dougall's initiative to enable taxpayers to designate all or a portion of their Utah State Income Tax refund into UESP accounts to save for college

Nonrefundable Higher Education Tuition Credit (Rep. Dougall)

- Rep. Dougall's initiative to provide a nonrefundable tax credit for college tuition and mandatory fees

January 7, 2009

MEMORANDUM

TO: State Board of Regents
FROM: William A. Sederburg
SUBJECT: The Economic Impact of Bonding for Capital Facilities in Utah

Issue

This past fall, the Commissioner's Office contacted Dr. James Wood, Director of the Bureau of Economic and Business Research at the University of Utah, to request that he update a previous report prepared in 2002 on the economic impacts of bonding for capital facilities. This report was completed in December and is attached for your information.

The Report points out that "at no time in Utah's post-World War II history has there been a greater need for fiscal stimulus," and that one way this can be achieved would be by legislative action to bond for needed capital facilities. It is estimated that bonding for \$200 million (which would cover approximately two-thirds of the capital facilities priorities of the Board of Regents) would result in the creation of 3,205 jobs. If \$400 million were bonded, \$6,410 jobs would result.

Dr. Wood will discuss his report to the Communications and Strategic Planning Committee and will be available to answer questions.

Commissioner's Recommendation

This is an information item; no action is necessary.

William A. Sederburg
Commissioner of Higher Education

WAS/DB
Attachment

January 7, 2009

MEMORANDUM

TO: State Board of Regents
FROM: William A. Sederburg
SUBJECT: Report on USHE Legislative Advocacy

Issue

On December 5, 2008 the Board of Regents approved a legislative advocacy plan for the 2009 Legislative Session. Regent Bob Marquardt, assisted by Associate Commissioner David Buhler, will provide an oral report regarding the progress made in implementing this plan. (A copy of the plan adopted in December is attached for your information.)

Commissioner's Recommendation

The Strategic Planning and Communications Committee should discuss the progress made and make any recommendations they feel would further advance the higher education agenda. This is an information item; no action is necessary.

William A. Sederburg
Commissioner of Higher Education

WAS/DB
Attachment

Legislative Advocacy Action Plan 2009 Legislative Session

Objectives

1. Increase understanding that a vital component of a healthy economic development plan is a strong and well-funded higher education system.
2. Minimize further budget cuts to higher education, including supporting Governor's proposal to phase-in cuts over three years.
3. Support funding for Higher Education capital facilities likely through bonding.

Advocates

In addition to the usual team of the Commissioner and Presidents and their staffs, we will coordinate with the following teams of advocates:

Regents & Trustees Team

Regents: Bob Marquardt, Meghan Holbrook, Nolan Karras, Marlon Snow
Two trustees to be invited from each institution.

Kickoff in January (date TBD) at SBR Offices. Presidents and Legislative Liaisons invited to attend.

Business Leaders Team

Bob Marquardt, Lead Regent, with Nolan Karras and Jerry Atkin.

A group of business leaders who support and are willing to champion state-wide higher education goals and causes, and coordinate with SL Chamber and other business groups as appropriate.

Capitol Hill Event

Annual lunch is scheduled for Friday, February 6. We need to rethink the approach, based on budget and political climate.

January 7, 2009

MEMORANDUM

To: State Board of Regents
From: William A. Sederburg
Subject: General Consent Calendar

The Commissioner recommends approval of the following items on the Regents' General Consent Calendar:

- A. Minutes – Minutes of the Regular Board Meeting held December 5, 2008, at the University of Utah in Salt Lake City, Utah
- B. Grant Proposals
 1. Utah State University – Institute of Education Sciences; “Problem-Based Learning within Gaming Environments: Extending the Stem Paradigm”; \$1,1018,407.89. Brett Shelton, Principal Investigator.
 2. Utah State University – Institute of Education Sciences; “Development of a Narrative Language Intervention Program for Children with Language Impairments and Eblish Language Learners”; \$1,420,079. Sandra Gillam, Principal Investigator.
 3. Utah State University – National Institutes of Health; “Genetic Factors of Memory and Cognitive Decline in the Elderly”; \$7,428,746. Christopher Corcoran, Principal Investigator.
 4. Utah State University – National Institutes of Health; “One-Carbon Metabolism, Insulin Resistance and Cognitive Disorders”; \$2,119,386. Ronald Munger, Principal Investigator.
 5. Utah State University – National Institutes of Health; “The Amygdala and Fat Ingestion”; \$1,753,750. David York, Principal Investigator.
 6. Utah State University – National Institutes of Health; “Mechanisms of Peripheral Fat Detection”; \$1,730,200. Timothy Gilbertson, Principal Investigator.
 7. Utah State University – National Institutes of Health; “Structural Studies of RNA Surveillance”; \$1,470,832. Sean Johnson, Principal Investigator.

8. Utah State University – National Institutes of Health; “Mechanisms of Phosphoryl Transfer”; \$1,760,022. Alvan Hengge, Principal Investigator.

William A. Sederburg, Commissioner

WAS:jc
Attachment

STATE BOARD OF REGENTS MEETING
 UNIVERSITY OF UTAH, SALT LAKE CITY, UTAH
 DECEMBER 5, 2008

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MEETING OF THE STATE BOARD OF REGENTS
UNIVERSITY OF UTAH, SALT LAKE CITY, UTAH
DECEMBER 5, 2008

Minutes

Regents Present

Jed H. Pitcher, Chair
Bonnie Jean Beesley, Vice Chair
Jerry C. Atkin
Janet A. Cannon
Rosanita Cespedes
France A. Davis
Katharine B. Garff
Greg W. Haws
Meghan Holbrook
Nolan E. Karras
Robert S. Marquardt
Anthony W. Morgan
Basim Motiwala
Marlon O. Snow
Teresa Theurer
Joel D. Wright
John H. Zenger

Regents Excused

David J. Jordan

Office of the Commissioner

William A. Sederburg, Commissioner of Higher Education
David Buhler, Associate Commissioner for Public Affairs
Joyce Cottrell, Executive Secretary
Troy Caserta, Accounting Officer
Joseph Curtin, Director of Institutional Research
Richard O. Davis, Deputy Executive Director, UHEAA
David A. Feitz, Executive Director, UHEAA
Spencer Jenkins, Assistant Commissioner for Public Affairs
Darren Marshall, Manager of Audit and Financial Services
Cameron K. Martin, Assistant Commissioner for Administration and Planning
Phyllis C. Safman, Assistant Commissioner for Academic Affairs
Gregory Stauffer, Associate Commissioner for Finance and Facilities
Lucille T. Stoddard, Associate Commissioner for Academic Affairs
Lynne S. Ward, Director, Utah Educational Savings Plan
Gary S. Wixom, Assistant Commissioner for Academic Affairs

INSTITUTIONAL REPRESENTATIVES

University of Utah

Michael K. Young, President
David W. Pershing, Senior Vice President for Academic Affairs and Provost
Theresa Ashman, Controller/Director, Financial Management

Paul T. Brinkman, Associate Vice President for Budget and Planning
John G. Francis, Senior Associate Vice President for Academic Affairs
Stephen H. Hess, Chief Information Officer
Laura Snow, Special Assistant to the President and Secretary of the University

Utah State University

Stan L. Albrecht, President
Raymond T. Coward, Executive Vice President and Provost
David Cowley, Associate Vice President for Business and Finance
Michelle B. Larson, Assistant Provost
Sydney J. Peterson, Chief of Staff

Weber State University

F. Ann Millner, President

Southern Utah University

Michael T. Benson, President
Rodney Decker, Interim Provost

Snow College

Scott L. Wyatt, President
Marvin Dodge, Vice President of Business Administration
Bradley A. Winn, Academic Vice President

Dixie State College

Stephen D. Nadauld, Interim President
Scott Talbot, Executive Director, Business Services

College of Eastern Utah

Mike King, Interim President

Utah Valley University

Elizabeth J. Hitch, Interim President
Jack R. Christianson, Executive Director, Center for Engaged Learning
Vincent T. Fordiani, Special Assistant to the President for Constituent Relations
J. Karl Worthington, Interim Vice President for Academic Affairs

Salt Lake Community College

Cynthia A. Bioteau, President
Dennis Klaus, Vice President of Business Services
Kimberly Henrie, Senior Budget Officer
Joe Peterson, Vice President of Instruction

Utah College of Applied Technology
Richard L. White, President

Representatives of the Media
Wendy Leonard, *Deseret News*
Rochelle McConkie, *Daily Utah Chronicle*
Jennifer Napier-Pierce, KUER Radio

Other Guests
Thomas C. Anderson, Office of the Attorney General
Carson Howell, Governor's Office of Planning and Budget
Spencer Pratt, Office of the Legislative Fiscal Analyst

Following a breakfast meeting with President Young and the University of Utah Board of Trustees, the State Board of Regents convened in Committee of the Whole at 9:30 a.m. Chair Jed Pitcher called the meeting to order. He welcomed everyone and excused Regent David Jordan.

Report of the Commissioner

Commissioner Sederburg reported, in an effort to improve efficiencies, he was in the process of reorganizing and streamlining the Commissioner's Office. The mandated budget cut has impacted higher education, including the Commissioner's Office, as well as other agencies of the state. Assistant Commissioner Cameron Martin is working on a Voluntary System of Accountability to coordinate efforts with the institutions and to gain greater credibility with the Legislature and Governor's Office. Candidates have been interviewed for an Assistant Commissioner in the Finance and Facilities Department, and a selection will be made in the next few days.

Measuring Up 2008. Commissioner Sederburg referred to the most recent Measuring Up report and noted 49 of the 50 states had received an "F" in Affordability; California received a "C-." Two years ago Utah received an "A" and things have improved since then, so we are disputing this "grade." Utah also dropped by 14 percent in Participation. In addition, Utah has the largest gap in the country between Hispanic and non-Hispanic students. Two factors are key: High tuition rates at our community colleges (150 percent of the Western state average) and programming for Hispanic students.

Budget Update. The state has been asked to cut \$1.1 billion from its budget over two years – this fiscal year and the next. The Governor's staff has also requested scenarios of 5 percent and 7½ percent cuts for this year and 10 percent and 15 percent cuts from next year's budget. The Governor's budget recommendation for higher education includes an additional 1½ percent cut for this fiscal year (for a total of 5½ percent cut). This could be accomplished by bonding for capital facilities and using cash to reduce the impact on budgets. President Benson asked about the size of a possible bond. Carson Howell said a \$25 million bond is proposed this year for the Utah Museum of Natural History. The Governor also will propose an additional 7 percent

reduction for the next fiscal year, with 3½ percent being “back filled” with one-time money. In addition, the Governor is proposing that the state continue to cover health insurance increases for employees, using the 75/25 percent split. Governor Huntsman is not recommending any salary increases for state employees. He is committed to fund O&M expenses for non-state funded buildings; however, his budget request did not include any new buildings this year. The Governor supports institutional flexibility in dealing with the budget cuts. He also proposed using some of the state’s “Rainy Day Funds” to cover the decreased revenues.

The legislative staff has requested a plan for an additional 5 percent cut in this fiscal year and 10 percent additional cuts from next year’s budget. A 5 percent cut for higher education would amount to \$36.8 million, and a 10 percent cut would be \$73.7 million. The Legislative Fiscal Analyst is now requesting scenarios for cutting an additional 7½ percent from this year’s budget and an additional 15 percent from next year’s budget. A 10 percent budget cut, if it came from tuition only, would require a tuition increase of 31 percent. We do not support that; we are trying to protect our students as much as possible.

The budget cuts are exacerbated by the fact that enrollments are up by 8½ percent this year. Commissioner Sederburg encouraged the Regents and institutional Trustees to speak with legislators about the importance of funding higher education. We want to preserve tuition flexibility but realize that some mandatory cuts will have to be covered by tuition increases. While this is not a pleasant experience, Utah is in a better fiscal condition than many other states.

State Board of Regents Organizational Plan

Chair Pitcher asked Regent Morgan to lead the discussion on strategic planning (Tab A). Regent Morgan said the proposed organizational plan focused on the core role and functions of the Regents, following on the discussions at the October Board meeting. A second part of this work will be the development of a new strategic plan. This was put “on hold” until the new Commissioner was hired. A third discussion was the restructuring of Board meetings. Collectively, Chair Pitcher, Vice Chair Beesley, Regent Morgan, Regent Zenger, and Commissioner Sederburg agreed to do these three things simultaneously. Regent Morgan thanked Assistant Commissioner Martin for preparing the proposed strategic and operational plan, which he noted is actually an organizational plan and not a strategic plan.

Regent Morgan reviewed the outcomes of the discussions in October: The Regents agreed to focus more on strategic issues, be more of an advocate for higher education, and actively participate in economic development. The document (Attachment to Tab A) included a very short summary of a proposed strategic plan. This discussion is intended to focus on the organizational plan. This is only the beginning of an ongoing process. The proposal is that during regular Board meetings, the morning session will focus on strategic issues. The afternoon session will consist of committee meetings to deal with substantive issues. There will continue to be three major committees, each of which may have subcommittees, as appropriate.

Regent Zenger said attention was paid to the comments made in the last meeting. Board meetings will be all-day meetings so that the Regents and Presidents can deal with meaningful issues. Commissioner

Sederburg said the discussions have also included the possibility of the Regents delegating additional responsibilities to the institutional Boards of Trustees. This organizational plan will move in that direction.

Assistant Commissioner Martin divided the group into five breakout groups and asked each to appoint a spokesperson to report back to the entire group. Following lively discussions of the five breakout groups, the Board reconvened in Committee of the Whole at 11:00 a.m.

Group 1. President Wyatt reported that his group was in favor of the proposed plan. There was good support for putting more focus on broader issues. Most of the discussion centered around meetings and Trustees. There was agreement to move forward with full-day meetings as outlined in the document. The Regents need to be on the campuses to actually experience what is going on at each institution. The group also raised the question of whether four meetings a year would be adequate and whether momentum could be maintained. Would a four-meeting annual schedule limit the Regents' ability to be on campus? There was considerable discussion on what could be delegated to the Trustees and what should not be delegated. The ultimate conclusion was that this was a good direction for the Board.

Group 2. Regent Karras reported a wide-ranging discussion in his group. There was agreement that this would be a public document that will go out to a much larger audience. The group discussed moving assessment issues from the Programs Committee to the Strategic Planning and Communications Committee and agreed that the Regents should look at functions horizontally and step back from the administrative functions. More responsibilities could be assigned to the Council of Presidents and the institutional Trustees. The Regents need to analyze the system as a whole and be advocates for higher education and its benefits. They may also include outsiders with expertise to force discussions on issues such as demographic trends and issues, for example. The group preferred six meetings a year rather than four. The Finance Committee description was deficient on budget issues. The Finance Committee should have access to the proposed budget before it is approved. The same is true for tuition increases. What is the Regents' role with the overall budget? The group suggested that existing committees look at the document to see what is working. Are all issues covered that should be covered?

Group 3. Joe Curtin reported that his group discussed committee structure. Is it sufficient? The group noted no mention of student affairs in the document. This could be a subcommittee of one of the major committees. Subcommittees might be beneficial to ensure that key issues are not overlooked. The Regents should provide statewide coordination of issues (campus security, economies of scale, statewide recruitment of students, etc.). Should the Regents and Commissioner's Office work fill a supervisory role or a supportive role? There should be a taxonomy of roles so that the Regents and the institutions are giving the same message to the Legislature on who is responsible for making what types of decisions. The Planning Committee should coordinate with the Programs Committee. With regard to the issue of holding fewer meetings, the group suggested the possibility of holding Board meetings electronically, working with subcommittees to ensure that the lighter meeting schedule would work.

Regent Holbrook moved that the Regents move forward in a conceptual direction, with the next Board meeting being an all-day meeting, beginning with three committees to shape the focus and

process of those committees, with the provision for change as the document evolves. Regent Atkin seconded the motion, which carried.

Regent Motiwala moved that the Board meet in executive session after the committee meetings to discuss personnel issues and/or real estate issues. Regent Morgan seconded the motion, which was adopted unanimously.

The Regents went to their respective committee meetings.

Following meetings of the Board committees and lunch, the Regents reconvened in Committee of the Whole at 2:25 p.m. Chair Pitcher apologized for the delay due to the Regents' meeting in executive session.

Utah Business Roundtable Update

President Millner reported that Regents, Presidents, and members of the business community will meet on December 11. She recognized Dr. Dennis Jones, who will facilitate the roundtable discussion. Dr. Jones said the purpose of the Utah Business Roundtable is to discuss the future of the state and how higher education contributes to the needs of the state in economic development and other areas. It is often difficult to get members of a roundtable who are willing to actually implement the agenda it has set. Much of that responsibility will likely fall to the Regents and Presidents. President Millner said she was excited to have the support of the Governor to pull together these important people to discuss the future of Utah and its economic prosperity.

Assistant Commissioner Martin pointed out that the meeting on December 11 would be held at the State Capitol. Another meeting is planned on December 12 at the Regents' offices to strategize on implementation of the vision and plan created the previous day. It is hoped that each institution will have a representative at that meeting. He asked the Presidents to let him or Secretary Cottrell know the name of the person who will be attending the December 12 meeting.

State of The University of Utah

Senior Vice President Pershing presented a PowerPoint presentation. He noted the University is the largest producer of four-year and graduate degrees in the Utah System of Higher Education. The U connects faculty with students via high-engagement programs through its Honors College, undergraduate research, Study Abroad, and other programs. State funding for University facilities is modest by USHE standards; the University constructs most (approximately 88 percent) of its facilities with non-state funds. Taxpayers pay only a small share of the cost of educating students at the University. Dr. Pershing discussed USTAR and its benefits to the University and to the state economy. It has been a wonderful support system for the University of Utah and Utah State University, particularly in the information technology and biotechnology areas. He noted that in 2006 national rankings, the University of Utah ranked first in efficiency in starting companies, second in overall number of companies started, second in inventions generated per research dollar, and ninth in revenue generated per research dollar. For several years, the University of Utah has averaged more than 20 start-up companies per year.

Commissioner Sederburg asked about taking research and making it applicable to the undergraduate levels. Dr. Pershing said the University believes the best way to achieve technology transfer is to move the student from the laboratory into the company.

General Consent Calendar

On motion by Regent Snow and a second, the following items were approved on the Board's General Consent Calendar (Tab O):

- A. Minutes – Minutes of the Regular Board Meeting held October 24, 2008, at Utah Valley University in Orem, Utah
- B. Grant Proposals – On file in the Commissioner's Office
- C. Grant Awards
 - 1. University of Utah – U.S. Department of Energy; "Clean & Secure Energy"; \$3,306,319. Philip J. Smith, Principal Investigator.
 - 2. University of Utah – Research Partnership to Secure; "Tight-Gas Reservoirs"; \$1,068,862. Milind Deo, Principal Investigator.
 - 3. University of Utah – National Highway Traffic; "NEMSIS Tech. Assistance Center"; \$1,614,576. Newell C. Mann, Principal Investigator.
 - 4. University of Utah – Bioenergenix LLC; "PAS Kinase and Diabetes Therapy"; \$1,179,888. Jared P. Rutter, Principal Investigator.
 - 5. University of Utah – National Institutes of Health/National Institute for Child Health and Human Development; "National Children's Study Wave-1"; \$1,000,000. Edward B. Clark, Principal Investigator.
 - 6. University of Utah – National Park Service; "Assistance for the University of Utah Museum of Natural History"; \$4,965,000. Sarah B. George, Principal Investigator.
 - 7. University of Utah – Lignin Biofuels LLC; "Lignin-to-Fuels"; \$1,981,063. Wlodzimierz Zmierczak, Principal Investigator.
 - 8. University of Utah – National Institutes of Health/National Institute of Neurological Disorders and Strokes; "Prevention of Epilepsy"; \$5,574,406. H. Steve White, Principal Investigator.

9. Utah State University – Utah State Office of Education; “EBLS Charter School Fund”; \$2,081,835. Sue McCormick, Principal Investigator.
10. Utah State University – U.S. Naval Research Laboratory; “Naval Research Laboratory (NRL) Advanced Ground, Air, Space, Systems Integration (AGASSI) Task Order 0001”; \$2,752,215. Niel Holt, Principal Investigator.

Reports of Board Committees

Strategic Planning and Communications Committee – Regent Meghan Holbrook, Chair

Campus Retention Plan Reports – University of Utah and Salt Lake Community College (Tab L). Chair Holbrook asked Regent Morgan to comment on the committee discussion. Regent Morgan said these were the last retention reports to be reported to the Board of Regents. Institutional representatives were asked to summarize briefly their efforts.

University of Utah – Associate Vice President Paul Brinkman said University officials pay attention to the faculty and how well they are doing. They pay attention to the students, as well, and how well they are doing in their educational pursuits. Plans have been implemented to coordinate efforts; a committee has been formed. It has been critical to get the students engaged with their education. This is being done in several ways. The University provides basic help (tutoring, orientation, etc.), and progress is being made. Student retention has been increased from the freshman year to the sophomore year by 8 to 9 percent in the past few years.

Salt Lake Community College – Vice President Joe Peterson referred to the Attachment to Tab L, which was in the agenda materials. SLCC is participating in the National Community College Benchmark Project. The college is in the 95th percentile in granting degrees. Students who complete a course in developmental English then complete a college course in English at the 75th percentile. However, there is still progress to be made in developmental math. Commissioner Sederburg asked if SLCC had a policy requiring attendance on the freshman level. This could improve retention. He then asked if the college provided mid-semester feedback so that the students know how they are doing. Dr. Peterson said SLCC has an early alert system for intervention. Regent Morgan said SLCC presented impressive data on retention of ethnic minority groups while being low in participation rates.

USHE Legislative Priorities for 2009 (Tab M). Associate Commissioner Dave Buhler referred to the written report in the agenda. He mentioned a possible bill to change border waivers to allow schools to use an FTE basis and share waivers between institutions. Regent Karras stated he was personally opposed to the proposed bill to remove UCAT from the Utah System of Higher Education, particularly in light of the current economic conditions. Commissioner Sederburg suggested that the UCAT bill and the concurrent enrollment bill be pulled from the list of bills getting higher education support until draft language is available. Chair Holbrook remarked that this was a conditional list which will change frequently, especially after the Legislature convenes. She suggested that discussion of legislative priorities be tabled until the January meeting. Regent Karras suggested that the Commissioner’s staff reconsider some of the proposed bills in light of the current budget cuts. **Regent Morgan moved to table this agenda item until January. Chair Holbrook seconded the motion, which was adopted unanimously.**

USHE Legislative Advocacy Plan for 2009 (Tab N). Associate Commissioner Buhler referred to Replacement Tab N. He noted the objectives on the attachment. The following teams of advocates will coordinate activity: (A) Regents and Trustees Team, chaired by Regent Bob Marquardt, will include Regents Holbrook, Karras and Snow as well as two trustees from each institution. A proposal was made in committee to have the Council of Presidents review the tradition of hosting a legislative luncheon at the Capitol and that the Presidents come back with a proposal. (B) Business Leaders Team, chaired by Regent Marquardt, will include Regents Karras and Atkin as well as business leaders who are supportive of higher education goals and causes. Regent Marquardt will coordinate with the Salt Lake Chamber and other business groups as appropriate. **Regent Morgan moved approval of the proposed Legislative Advocacy Plan. Regent Zenger seconded the motion, which was adopted.**

Finance, Facilities and Accountability Committee – Regent Jerry C. Atkin, Chair

University of Utah – Non-state Funds Capital Development Projects for 2009-2010 (Tab H). Chair Atkin said Board approval was required prior to the beginning of the 2009 General Legislative Session so these projects will be eligible for state-funded O&M or capital improvement funding: (1) The Beverly Taylor Sorensen Arts and Education Complex, (2) Ambulatory Care Complex, (3) David Eccles School of Business Replacement and Expansion, (4) Kennecott Building Renovation, and (5) South Campus Housing. **Chair Atkin moved approval of the University's request, seconded by Vice Chair Karras. The motion carried.**

University of Utah – Authority to Pursue Issuance of Revenue Bonds (Tab I). Chair Atkin said these revenue bonds would finance two construction projects previously approved by the Board. The first is a bond not to exceed \$44 million, plus amounts required for debt service reserves, issuance costs, and capitalized interest, if necessary. This bond would be used for the infrastructure development of the University "green field" site and the construction of a central chilled water plant. Debt service would be paid from research overhead funds, with infrastructure fees being used to help pay down the bond at a later date. The second project is the expansion of the University Neuropsychiatric Institute (UNI). This will expand the UNI to accommodate increasing demand and to better accommodate economies of scale. Expansion costs would be covered by a \$45 million revenue bond, with an additional \$5 million coming from other internal sources. **Chair Atkin moved approval of the purchase of these revenue bonds. Vice Chair Karras seconded the motion, which was adopted unanimously.**

UHEAA – Approving Resolution, SBR Student Loan Revenue Bonds, Senior Series 2008A (Tab J). Chair Atkin reported UHEAA staff had been able to obtain a letter of credit from Wells Fargo Bank for approximately \$200 million to retire old bonds. The differential between interest rates on existing bonds and expected interest rates on new bonds will result in an approximate savings of \$5.7 million annually. Chair Atkin remarked that this credit is very highly sought after. He commended UHEAA officials for this achievement. **Chair Atkin moved approval of the approving resolution. Vice Chair Karras seconded the motion, which was adopted unanimously.**

UHEAA Update (Tab K). UHEAA Executive Director David Feitz reported no significant change since the October Board meeting. UHEAA officials have been able to fund all student loans this year without delay. Director Feitz said Senator Orrin Hatch had been in the UHEAA offices earlier in the week; he is very supportive

of the local student loan program. Utah has been able to reduce its student default rate from 4.3 percent to 2.8 percent.

Academic, CTE and Student Success (“Programs”) Committee – Regent Katharine B. Garff, Chair

University of Utah – Bachelor of Science Degree in Athletic Training Education (Tab B). Chair Garff reported this request was in response to a 2007 review by the Commission on Accreditation of Athletic Training Education, in which accreditors said that for the University to keep the Athletic Training Education Program’s accreditation, the program would need to be its own major. The degree will allow graduates to become eligible to sit for the national certification exam, become licensed to practice in Utah, and meet the expectations and requirements of the national accrediting agency. **Chair Garff moved approval of the Bachelor of Science Degree in Athletic Training Education. Regent Karras seconded the motion, which was subsequently adopted.**

University of Utah – Doctor of Philosophy (Ph.D.) Degree in Rehabilitation Science (Tab C). Chair Garff said the proposed program would prepare researchers and scholars to determine the best scientific bases of rehabilitation practices and the effectiveness of those clinical practices. Shortages in trained faculty support the need for this program. **Chair Garff moved approval of the Ph.D. Degree in Rehabilitation Science. Regent Karras seconded the motion, which was adopted.**

Consent Calendar, Programs Committee (Tab D). **On motion by Chair Garff and second by Regent Karras, the following items were approved on the committee’s Consent Calendar, with Regent Wright voting in opposition:**

Southern Utah University –

- A. The Utah Center for Arts Administration
- B. Certificate in Speech Writing
- C. Endorsements in Gifted and Talented Education, Elementary Mathematics and Educational Technology

Information Calendar, Programs Committee (Tab E). Chair Garff did not present an oral report because of time constraints.

Utah State University/College of Eastern Utah – Consultants’ Final Report (Tab F). Commissioner Sederburg reported that the three consultants did not recommend a merger of the two schools at this time.

Weber State University – Progress Report for a Bachelor of Science Degree in Engineering (Tab G). Commissioner Sederburg said there was a need for an engineering program in the WSU area. A three-member committee was appointed several months ago to study the issue and make a recommendation. Their recommendation was not to put an engineering program at Weber. However, Weber officials feel there is a strong need. A meeting has been scheduled with USU President Stan Albrecht and WSU President Ann Millner to work out a collaborative agreement. Chair Garff expressed her appreciation to the presidents, vice presidents, and their respective staffs for their excellent work.

Report of the Chair

Chair Pitcher referred to his written report in the Regents' folders. He thanked President Young and his staff for their hospitality and wished everyone a very Merry Christmas.

Adjournment

The meeting adjourned at 3:00 p.m.

Joyce Cottrell CPS, Executive Secretary

Date Approved

